Lectures

ON

THE DIAGNOSIS AND TREATMENT OF THE PRINCIPAL FORMS OF PARALYSIS OF THE LOWER EXTREMITIES.

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LECTURE IV.—(PART III.)

GENERAL CONCLUSIONS OF THE COURSE.

Relative frequency of the various forms of paraplegia in men and women at different ages.—Signification of the various symptoms of paraplegia, or co-existing with it.—Cramps, twitchings, &c.—Referred sensations in the paralysed limbs.—Feeling of tightness round the body or lower limbs.—Alterations in nutrition of paralysed parts.—Erection of the penis.—Temperature of the paralysed lower limbs.—Degree of paralysis of lower limbs, &c.—Anæsthesia and hyperæsthesia.—Reflex power.

BEFORE entering into the discussion of the general characteristics of the various forms of paraplegia, we will give here some statistical accounts that may be found interesting. The facts on which these accounts are grounded have all been observed by myself. We have left aside not only all the cases of paraplegia in which there were doubts as regards the diagnosis, but also those cases about which we have not kept at least a few notes.

The following table shows the relative frequency of the various forms of paraplegia in men and women:—

	Men.		Women.		Total.
Myelitis*	33	...	9	...	42
Non-inflammatory softening	25	...	8	...	33
Reflex paraplegia	19	...	6	...	25
Congestion	8	...	4	...	12
Tumour or pressure upon the cord	7	...	2	...	9
Spinal meningitis	6	...	1	...	7
Hæmorrhage	5	...	2	...	7
Hæmorrhage followed by myelitis	4	...	1	...	5
Hysterical paraplegia	...	...	4	...	4
	107	...	37	...	144

These facts show that the most frequent causes of paraplegia are the inflammation and the non-inflammatory softening of the spinal cord. Next in importance, as regards frequency, is the reflex paraplegia. The most remarkable feature of this table is that paraplegia is much more frequent in men than in women. This conclusion is borne out also by the cases about which we have not come to any positive diagnosis; out of 27 of such cases, 18 were men, and 9 women.

As regards the age at which paraplegia begins, we have notes of 156 cases, showing that it may appear at any age, but that certain forms belong more to certain ages than to others. For instance, reflex paraplegia is the most common form in children, myelitis is the most frequent cause of paraplegia in adults, and non-inflammatory softening the predominant cause of this paralysis in old age.†

Signification of the various Symptoms belonging to, or co-existing with, Paraplegia.

We have given many details as regards these symptoms in our descriptions of the reflex paraplegia (Lect. I. and II.); of myelitis, meningitis, and congestion of the cord and its meninges (Lect. III.); of the non-inflammatory softening, hæmorrhage, and tumours (Lect. IV.) We will now take up each of the most important symptoms, and show to what form of paraplegia it is especially attached, and what is its cause.

1st. *Cramps, Twitchings, and other Convulsions.*—The signification of tonic or clonic convulsions in paralysed muscles, in cases of paraplegia, is quite evident: they are incontestable results of an irritation of either the anterior roots of the spinal nerves, the spinal cord, or the sensitive nerves in any part of their length, through a reflex action. In cases of myelitis it is chiefly under the form of cramps that convulsions occur; the frequency of these spasms is one of the characteristics of this affection. In cases of tumours pressing upon the spinal cord, especially upon its posterior surface, cramps are not so frequent as twitchings or a general spasm producing a drawing up of the lower limbs, which sometimes remain permanently in a state of spasmodic flexion. In cases of chronic meningitis or congestion of the spinal cord or its membranes, twitchings are more frequent than cramps. In cases of reflex paraplegia, the external irritation that produces the paralysis sometimes produces also spasmodic movements by a reflex action. Especially in those cases where the rectum or the urethra are the parts from which starts the irritation, there is what the patient calls a *catchiness* or a drawing up of the legs. In cases of hæmorrhage in the spinal canal, tetanic convulsions are frequently observed. Rigid spasms of the muscles of the back are amongst the most prominent symptoms of spinal meningitis. Amongst the affections of the spinal cord that produce paraplegia, one of the most frequent—the non-inflammatory or white softening—is characterized by a total absence of cramps, twitchings, or other convulsions.

On the whole, some form of morbid muscular contractions exists constantly in myelitis or spinal meningitis, and frequently in cases of congestion of the spinal cord or its membranes, or of tumours or other cause of pressure upon the spinal cord, and also, sometimes (by a reflex action), in cases of reflex paraplegia. On the other hand, a complete absence of morbid contractions will be observed in all cases of non inflammatory softening, and in the majority of cases of reflex paraplegia.

2nd. *Referred Sensations in the Paralysed Limbs.*—These morbid sensations, like morbid contractions, are the results of some kind of irritation, and, as we have tried to prove in Lect. III., the vital properties of the spinal cord changing when it is inflamed, these sensations may be produced by an inflammation of the grey matter. The various kinds of conductors passing through or along the grey matter being then irritated, give origin to all kinds of sensations which are *referred* to the various parts of the lower limbs. Sensations of cold or of heat, of touch (formication, tickling, pressure, tightness, &c.), of pain (pins and needles), and also sensations arising from muscles, and giving the idea that the limbs are in a different position from that in which they really are,—in fact, all the sensations that pressure or some other cause of irritation may produce when applied to the ulnar or the sciatic nerves,—are often observed. In myelitis, some of these sensations always exist; in meningitis, or when there is simply a congestion of the spinal membranes, most of them are also observed, but less intense than in myelitis. In cases of irritation of the posterior roots of nerves by a tumour or a displaced bone, &c., referred sensations exist also. In such cases of irritation by a tumour, &c., and also in cases of congestion or meningitis, there is a feature which distinguishes these affections from myelitis: it is that in this last affection there may be a reference of sensations to all the parts of the body that receive their nerves from the part of the spinal cord which is below the upper limit of the inflammation, while in the three other affections the sensations are referred only to those parts of the body which receive their nerves from the part of the spinal cord at the level of the seat of the irritation. The non-inflammatory softening, a hæmorrhage, or a tumour in the grey matter (as long as they do not produce inflammation), and also the reflex paraplegia, are characterized by the absence of referred sensations.

3rd. *Feeling of Tightness round the Body or round the Lower Limbs.*—This sensation, which is so frequent in myelitis, exists also, sometimes, in cases of tumours, of congestion of the spinal cord, and in meningitis. It is absent in cases of non-inflammatory softening and of reflex paraplegia.* From this last fact it results that the tightness across the chest or the abdomen, at the level of the upper limit of the paralysis, does not depend,

* Simple myelitis in most cases; in the other cases, myelo-meningitis.

† The number of cases of paraplegia now under my care or that of my colleague, Dr. Ramskill, at the National Hospital for Paralytics and Epileptics, is already pretty near 100; and as every day new cases are coming in (as outpatients), we shall soon have the elements of good statistics.

* I need not say that this symptom, as well as many others depending upon a degree of irritation of the spinal cord or its nerves, will be observed in cases of reflex paraplegia, or of non-inflammatory softening of the spinal cord, if in those cases there is some degree of congestion in the membranes or in the cord above the softened part, or that which causes the reflex paralysis.

as has been said, upon the effort made in moving the paralysed parts by the non-paralysed muscles just above them. Another objection to this explanation is, that the same feeling which exists around the body exists also, sometimes, around the lower limbs, in myelitis. The most probable mode of production of this strange feeling is, that it is due to some irritation of sensitive nerve-fibres in the spinal canal producing a sensation referred to the periphery of the body (abdomen, chest, or limbs).

4th. *Alterations in the Nutrition of Paralysed Parts.*—These alterations chiefly depend upon an irritation of the spinal cord or its nerves. It is principally in myelitis that they are observed. A rapid wasting of the paralysed muscles, the production of bullæ or sloughs over the sacrum, the nates, &c., are the most frequent results of an irritation of the vaso-motor or of the other nerves that have an influence upon the nutrition of the lower half of the body. These alterations are not observed in cases of reflex paraplegia, or of non-inflammatory softening of the spinal cord; neither do they exist in cases of hæmorrhage, or of a tumour in the grey matter, unless an inflammation is produced.

5th. *Erection of the Penis.*—This is another symptom showing an irritation of the spinal cord or its nerves. It exists frequently at night, and sometimes in the daytime, in cases of myelitis or congestion of the spinal meninges. It is also observed, but less frequently, in cases of meningitis, of tumour upon the spinal cord, of hæmorrhage in the spinal canal (outside of the cord), and sometimes even in the reflex paraplegia, but then only on the introduction of a catheter or in consequence of some peripheric irritation. This symptom does not exist in cases of non-inflammatory softening, or of hæmorrhage or a tumour in the grey matter of the spinal cord.

6th. *Temperature of the Paralysed Lower Limbs.*—In those affections in which there is an irritation of the spinal cord or its membranes (congestion, myelitis, meningitis, pressure on the cord by effused blood, a tumour, or a displaced bone, &c.), the lower limbs, and especially the feet, are almost constantly very cold. This symptom is the consequence of the irritation of the vaso-motor nerves, which produces a contraction of the muscular fibres of bloodvessels, just as the irritation of the nerves of the muscles of the legs, feet, &c., produces cramps, twitchings, &c. In the reflex paraplegia the feet are also sometimes very cold, in consequence of a reflex contraction of their bloodvessels. In cases of non-inflammatory softening of the lumbar enlargement of the spinal cord, with a complete destruction of the vital properties of this part, the lower limbs are almost constantly very warm, as a result of the paralysis of the vaso-motor nerves.

7th. *Degree and Extent of Paralysis of the Lower Limbs, the Bladder, and the Rectum.*—Of course great differences exist as regards the degree and extent of the paralysis, according to the degree and extent of the alterations in the spinal cord. We do not intend entering into any details on this subject. We wish only to say here that—1st, as regards *the mode of appearance of the paraplegia*, if it be sudden it is almost always due to a hæmorrhage either in the cord or outside of it; 2nd, as regards *the degree of the paralysis*, it is equal in all the muscles of the lower limbs if the alteration occupies the whole of the lumbar enlargement or is above it, except in cases of reflex paraplegia, where some muscles may be much more affected than others; 3rd, as regards *the changes in the degree and extent of the paralysis*, they are rapid and frequent in cases of reflex paraplegia, of chronic meningitis with effusion, and of spinal congestion, while, on the contrary, they are slow and rare in cases of myelitis, tumours, and non-inflammatory softening; 4th, as regards the paralysis of the bladder and of the rectum, they exist more frequently in cases of myelitis, of non-inflammatory softening or of hæmorrhage in the grey matter, than in the reflex paraplegia or in cases of tumour, of congestion, or even meningitis.

8th. *Anæsthesia and Hyperæsthesia.* — Myelitis existing most frequently in the grey matter, anæsthesia (the different kinds of it, with the loss of the power of guiding the voluntary movements) is one of the ordinary symptoms of this affection. This symptom is less frequent or less intense in most other cases of paraplegia, except, of course, a hæmorrhage in the grey matter. As regards hyperæsthesia—i. e., a morbidly increased insensibility, it is frequent in cases of incomplete paraplegia, when the posterior columns of the spinal cord, in a small part of their length, are destroyed, either by a tumour or by a softening (inflammatory or not).

9th. *Reflex Power.*—In all cases of paraplegia in which the lumbar enlargement of the spinal cord remains uninjured, the reflex power of that enlargement increases notably. On the contrary, the reverse is observed in cases of alteration of this enlargement.

(To be concluded.)

A Course of Lectures
ON
PAIN,
AND THE
THERAPEUTIC INFLUENCE OF MECHANICAL AND PHYSIOLOGICAL REST
IN
ACCIDENTS & SURGICAL DISEASES.

Delivered in the Theatre of the Royal College of Surgeons.

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LECTURE VI.—(PART I.)

MR. PRESIDENT AND GENTLEMEN,—Believing that even in public lectures some little variety may add a slight degree of charm, I have taken the liberty to break in upon the order of my subject, and to ask you to turn away your attention for the present from the consideration of pain, as associated with disease of the spine.

As I contemplate the subject of *rest* in its curative aspects, its application appears to me so widely extensive, and the variety of conditions in which we may derive important assistance from calling it to our aid so great, that I am inclined to say there are few surgical diseases to the relief of which it may not be made to contribute. My present object, however, is to remind you of its beneficial influence in some of those familiar cases of disease which the surgeon in practice meets so frequently. I have therefore selected for your notice to-day, its agency in the cure of abscesses, sinuses, and certain forms of ulcer.

I would now put the question—Why do surgeons open abscesses? Various reasons may be given: to relieve patients from pain and constitutional disturbance; to prevent the abscess enlarging, or to limit the destruction of tissues; to prevent further encroachment upon important organs; to remove the accumulated extraneous fluid, &c. This is all true; but still the question presents itself—What is the ulterior object in opening an abscess? The ulterior object is to allow of and to secure coaptation of the internal surfaces of the abscess—to give its internal surfaces rest, so as to permit of their union, and further rest, for the purpose of consolidating the medium of union. This ulterior object has, or ought to have, an important bearing upon the surgeon's proceeding in opening an abscess. In order to empty an abscess of its pus, we must make the opening into it at its lowest part, just as, if we desired to empty a pail of its water, without disturbing the pail, we should make a hole at the bottom of it; or if we desired to remove the whole of the fluid contents of a soft bladder, and induce collapse of its pliant walls, the aperture of exit must be made at the lowest part of the bladder. So here, in the treatment of abscess, it must be borne in mind, that it is only by the evacuation of the whole of the fluid of an abscess, that we can render coaptation of the two surfaces of its walls possible.

It is worthy of remark, that an abscess, under many circumstances, experiences a great difficulty in getting rid of its purulent contents. We see what a great length of time an abscess requires to push out of it any solid extraneous body, such as a portion of wood or clothing, or of necrosed bone; or a wound to rid itself of a portion of linen thrust into it. A considerable time may elapse before the granulations can extrude these solid bodies. But in the case of simple abscess, the collection of fluid naturally sinks to the bottom, and compels the abscess to fill up its floor by the tardy process of new growth or slow adhesion, so as to eject the fluid against gravitation. The granulations, or newly organized lymph, may ultimately succeed in forcing the fluid contents out of the abscess,

but it is a long time before the two surfaces can be brought into accurate apposition, and in general terms the abscess is a very long time healing. Abscesses, then, ought to be opened at their most depending or lowest part. It is the only way to promote surface coaptation; it is the first step towards cure; it is also the best preventive against the necessity for the daily squeezing of an abscess for the purpose of emptying it: even this daily interference with nature by the surgeon or patient might be fairly called very "meddlesome surgery." There cannot be a doubt that by rubbing the two surfaces of an abscess together once or twice a day, we are not only likely to disturb the natural process of adhesion or granulation, but almost sure by such friction to induce an inflammatory condition in the structures, which, for the purpose of repair, ought to be in a comparatively healthy state, and quietly taking their own steps towards healthily filling up the whole interior of the abscess.

The lowest part of the abscess depends necessarily on the position of the patient. Thus, in the case of a patient in bed having a sub-fascial abscess of the thigh, the lowest part of the abscess may be the upper part of the thigh. These are simple propositions that have their daily association with professional life, and if we recognise the necessity for coaptation of the two surfaces of an abscess in order to aid a rapid recovery, we admit the necessity for opening the abscess at its most depending part.

I might here, for example, remind you, in illustration, that, in a case of suppuration under the temporal aponeurosis, we sometimes experience great difficulty in curing it. This difficulty arises partly from the necessary movement of the surrounding structures (temporal muscles especially), and from our inability to reach the floor of the abscess. We know that if we open this abscess above the zygomatic arch, whilst the floor of it extends much lower down, the abscess is extremely tedious in closing, and the surgeon fails in his object; by-and-bye, Nature herself makes a hole by ulceration into the mouth, at the lowest point of the abscess, near the coronoid process of the lower jaw, and then the abscess or sinus closes. Such a case marks clearly the difficulty in which the surgeon is placed. Under these circumstances, and in such a case, it is better for the surgeon (instead of allowing Nature to be the sole agent in accomplishing the object in view) to pass his probe downwards, through the aperture made above the zygomatic arch, towards the mouth, to feel the end of the probe through the walls of the mouth, and then to make a small aperture opposite the point of the probe, and in that way obtain an outlet at the bottom of the abscess; then surface coaptation, equivalent to rest, quickly takes place, and the abscess, instead of being tedious, comes to a rather speedy termination by "rest."

Sub-Mammary Abscess.

In marked illustration of the advantage of this principle, I may mention a case detailed to me by Mr. Luke. It was that of a very large abscess, to which he was called some years ago, and which he cured speedily by acting upon these views of opening the abscess at its lowest part, and securing subsequent surface coaptation of its walls.

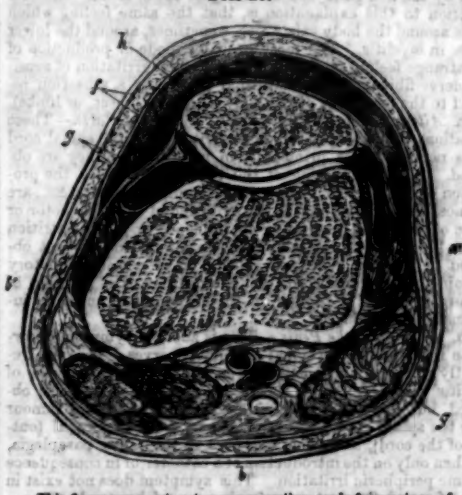
The patient had a very large abscess, extending under both mammæ across the front of the chest, from which Mr. Luke let out the whole of its contents—more than three pints of pus. He took care to open the lowest part of this abscess, and to coapt the dome and floor of the abscess by pressure with pads of lint, plaster, and bandages. The result of this accurate coaptation was that the abscess was completely cured in a few days.

Thus this patient was cured by producing accurate coaptation, or, according to my interpretation, by giving "rest" to the walls of the abscess, and enabling them to become united and consolidated by adhesion. This case expresses an important fact, for there can hardly be a doubt that, if this large abscess had been opened at the upper part, and the pus incompletely evacuated, it would have required a very long time on the part of Nature to extrude the fluid. We have here, then, a good example showing the advantage, on a large scale, of opening an abscess at its lowest point,—the interpretation of the successful result being that of accurate coaptation and "rest."

Abscess over Knee-joint.

I have had this diagram made for the purpose of illustrating the position of one kind of abscess which occurs in the neighbourhood of the patella. I have seen two or three such cases, where an abscess upon the exterior of the knee-joint has ultimately found its way into the interior of the articulation. In this sketch from nature I have endeavoured to indicate the position of an abscess underneath a layer of fascia lata which is prolonged over the patella. Such an abscess may be the result of an inflammation beginning within the bursa upon the patella, or supervening upon any accidental inflammation at that part. This abscess extends laterally on both sides, spreading over the joint, so that if pressure with the finger be made on one side, fluctuation will be felt on the other side, leading to the suspicion that the abscess or collection of fluid is really within the knee-joint, and fluctuating through the interior of it; and, under the supposition that it is an inflammatory effusion, it may create a great deal of unnecessary alarm. Upon careful examination, however, it will be found that a thin layer of fluid is conveyed over the patella from one side to the other, thus marking its ex-articular position. I would not place such a rudimentary case before you, except to controvert an error which not unfrequently occurs, and which I know has led to the death of two persons by giving time and opportunity for the abscess to find its way into the interior of the knee-joint. In cases of this kind of abscess, whether it originate in a bursa or some other structure, it is of little use to open the abscess at its top—that is, over the patella. I have seen many examples of this abscess, and it has been almost invariably necessary ultimately to open its lower part, on each side. In one case, in which this was not done early enough, the abscess found its escape under the fascia of the thigh, and it became a very large sub-fascial abscess. This might have been obviated if apertures had been made, one on each side, so as to prevent extension upwards.

FIG. 20.



This figure represents a transverse section, made from nature, of the knee-joint and surrounding soft parts, including the popliteal space. The joint is in a state of extension, and the section is made above the semilunar cartilages, and higher than the femoral attachments of the crucial ligaments. *a*, Anterior part of knee-joint. *a'*, Outer side of joint. *b*, Posterior part of joint. *b'*, Inner side of joint. *c*, Patella in section, with a thin layer of fascia upon it. *d*, Femur in section. *e*, Interior of joint, bounded by synovial membrane, and extending between the patella and femur. *f*, Skin and subcutaneous areolar tissue. *g*, Fascia lata. *h*, Space occupied by an abscess, extending over the patella and posteriorly on both sides of the joint, overlying the lateral prolongations of the synovial capsule upon the condyles of the femur.

This drawing, and some others used in these lectures, were copied from fresh dissections, kindly made for me by my colleague, Mr. Durham, Demonstrator of Anatomy at Guy's Hospital.

It is true of this kind of abscess, that after opening the top of it, if the knee-joint can be carefully strapped on each side, so as to secure accurate coaptation of the walls of the abscess, we may succeed now and then in closing it. But in this proceeding there is some little risk of the whole of the matter not being evacuated, and thus pressure may lead to ulceration towards the interior of the joint; for abscesses follow in their course, the direction of the least resistance, and the membrane between the abscess and the interior of the joint may be very thin.

Axillary Abscesses.

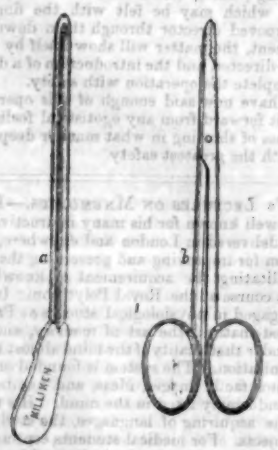
A large abscess extending high into the axilla, under the pectoral muscles, should be opened from the axilla, through the floor of the abscess. If you open the abscess at the upper

and anterior part of the axilla, you open the top of the abscess, and the tediousness of the case annoys both patient and surgeon. I saw, with Mr. Blenkarne, a case of this kind, many years ago, in which this difficulty and annoyance occurred to us. I stupidly opened the abscess at its upper and anterior part; the man was relieved, but it was weeks and weeks before he got well. The error was that I had opened the top instead of the floor of the abscess; we could not keep its walls quiet, and Nature had to fill it up from the bottom, under the disadvantage of frequent disturbance by the movements of the shoulder.

To make the opening into an abscess at its most depending part is not always a very easy and safe proceeding; so it becomes important to ascertain, as far as we can, what is the safest and the best method of opening a deep abscess. Here I must take the opportunity of mentioning to you a method that I have employed for this purpose during a great many years, and I have never seen a single inconvenience arising from it. Persons have died, and many lives have been endangered, by hæmorrhage consequent upon opening a deep abscess by the lancet or bistoury; and within the last twelve months I have known two lives placed in great jeopardy by the use of the lancet to open deep abscesses. These circumstances alone will, I hope, be sufficient excuse for my pressing this subject on your indulgent attention; and my own long experience of its value justifies the high opinion I entertain of the method of opening a deep abscess which I am about to recommend to your notice as the safest and best. It is safest, because it is scarcely possible to inflict by it any injury on bloodvessels or nerves. I think it is the best plan too; for if the deep opening into an abscess be lacerated and bruised, it is not at all likely to close by adhesion; and undoubtedly, when we have opened a deep abscess, we are desirous that the deep opening should not close immediately; and in principle, all will admit that if a lacerated opening be made instead of an incised one, that will be one of the circumstances adverse to a quick readhesion. Nay, more: supposing a lacerated wound to be made deep in the thigh, for example, and a bloodvessel divided by being torn asunder, it would be a lacerated wound of the bloodvessel, and therefore not so likely to bleed as an incised wound.

Some surgeons, when speaking of deep abscesses, say, with rash confidence, "Plunge in a knife." It is a grand term—"plunge a knife into a deep abscess." It is an heroic, not a courageous plunge for the surgeon; for it is without danger to himself, but perhaps it is a fatal stab to the patient. Some more careful surgeons say, "Wait until the abscess comes nearer to the surface, so that it can be opened without danger;" but the patient may die in the meantime. Now the plan I have been in the habit of adopting and recommending is this—for example, in the case of opening a deep abscess in the axilla,—cut with a lancet through the skin and cellular tissue

FIG. 21.



a, Director. *b*, Dressing forceps.

The free end of the director should be made blunt and rounded; the last quarter of an inch of the groove ought to be increasingly shallow, until it emerges upon the rounded end of the director.

The end of the closed blades of the forceps should be of a size adapted to run easily in the groove of the director.

and fascia of the axilla about half or three-quarters of an inch behind the axillary edge of the great pectoral muscle; at that part we can meet with no large bloodvessel. There is only a small branch of one of the external thoracic arteries, which sometimes runs along the edge of the axilla; excluding that, which if wounded can be easily ligatured, we run no other risk, so far as I can see. Then push a grooved probe or grooved director upwards into the swelling in the axilla; and if you will watch the groove in the probe or director as it is being passed up through the comparatively healthy tissues into the axilla, a little stream of opaque serum or pus will show itself. Then take a blunt (not a sharp) instrument, such as a pair of "dressing forceps," and run the closed blades along the groove in the probe or director into the swelling, and by opening the handles you at the same time open the blades situated within the abscess, and so tear open the abscess; and, lastly, by keeping the blades of the forceps open during the withdrawal of the instrument, you leave a lacerated track or canal, communicating with the collection of pus, which will not readily unite, and which will permit the easy exit of the matter. In this way you may open an abscess deep in the axilla, or in other important parts of the body, without fear of inflicting any injury upon the patient. Having been connected many years with a large hospital, I have necessarily had good opportunities of trying this method. I have not opened a deep abscess during that time in any other way, and I can say, honestly and truly, that it has never failed, and that I have never observed any inconvenience from it.

A curious coincidence happened to me with respect to this method of proceeding. I was requested some years ago to see a surgeon in London, who was suffering from a large inflammatory swelling in the arm-pit, resulting from a wound made at a post-mortem examination. When I saw him, he was quite typhoid; he had a dry, brown tongue, and he was delirious. His pulse was very feeble, and there were other circumstances indicating impending fatal mischief. I opened the abscess in the axilla in the way which I have pointed out, passing the grooved director between two and three inches up into the axilla, and opening the abscess by a pair of dressing forceps. The patient got well, the starting-point of his recovery being the opening of the abscess. About ten years afterwards, this same surgeon came to me one morning, in a great hurry, to request me to go with him immediately to see a patient who was dying. He then told me that on the previous afternoon he had opened an abscess in the arm-pit. "I did it," he said, "without any difficulty, as well as possible, for I used Liston's knife," (blaming the poor knife for what had happened.) "I opened the abscess yesterday, and let out the matter, and this morning I find the arm-pit fuller than before it was opened, and blood is coming out of the hole I made. The man is nearly dead, and his arm is as big as two." We went directly, and found the man nearly at the point of death from loss of blood. I had to enlarge the aperture in the axilla, so as to enable me to introduce my hand, and scoop out the whole of the blood, and to expose the cavity to the external air. No further hæmorrhage occurred, but the patient was very nearly killed. Now, this was the very same surgeon whose axillary abscess I had opened with the dressing forceps high up (two or three inches from the surface), without doing him any mischief. He, with "Liston's knife," wounded a bloodvessel in the arm-pit, which led to the patient's fearful danger.

Orbital Abscess.

Some years ago I had in Guy's Hospital a patient with a fractured base of the skull, the fracture extending across the posterior part of the orbit. After some little time the parts within the orbit began to swell, and the eye to be protruded. The patient was amaurotic on that same side, and was suffering locally as well as constitutionally very severely. With the hope and probability of finding a collection of blood or pus at the deeper part of the orbit, I made, with a common lancet, a small cut horizontally through the fibres of the orbicularis palpebrarum of the upper eyelid, and passed through it a grooved probe or director along the roof, towards the apex of the orbit. A little purulent fluid was visible in the groove of the director. I then introduced along the groove the blades of a small pair of dressing forceps, and opened an abscess by separating the handles of the forceps; the matter escaped freely, the patient was relieved of his distress, the pressure upon the optic nerve was thus removed, the amaurosis disappeared, and he ultimately recovered without further aid.

Deep Cervical Abscess.

About four or five years ago I was sent for by a surgeon in my neighbourhood to see his wife. She was a delicate woman, in about the mid-period of pregnancy, and it was feared that

she would miscarry in consequence of having a large inflammatory, painful swelling deep in the right side of the neck. There was an obvious fluctuation in the swelling, and it was thought to be an abscess. She was suffering greatly, and the question was, how to reach the seat of the disease. I should not have dared to put a knife in, because, with all the anatomical accuracy which a surgeon may possess, it must be admitted that movable parts get very much displaced by the enlargement of an abscess, so that it is not possible for the best anatomist to tell with accuracy the exact position of those bloodvessels and nerves which it is important to avoid. I cut through the cervical fascia with a lancet, thrust into the swelling a grooved probe, and used the dressing forceps. In this way the abscess was opened, and the patient did perfectly well. This was the case of the wife of a surgeon, who saw the difficulty of opening the abscess, and who appreciated the advantages of this safe method of proceeding.

Post-pharyngeal Abscess.

A short time ago, while going round my ward at Guy's Hospital, a little child was brought in; and the circumstances of her case were shortly these:—She was an unhealthy child, twelve months old, and had a post-pharyngeal abscess, with disease of the cervical vertebræ. She had a large deep swelling in the upper part of the neck, on the left side, extending to the angle of the jaw. The carotid artery was pulsating upon the anterior surface of the swelling, close to the anterior edge of the sterno-cleido-mastoideus. The trachea was pushed forward and to the right side, and the tongue was protruded. My finger detected in the pharynx a swelling, which prevented deglutition; respiration was extremely difficult, and the spine and neck were curved forward. Large superficial veins were crossing the left sterno-cleido-mastoideus, and occupying the space between it and the trapezius muscle. Examination of the throat through the mouth brought on extreme dyspnœa, so that the child was nearly suffocated, the face becoming quite livid. On the previous evening, a surgeon was called to the case, for the purpose of performing tracheotomy, but it was thought better to send the child to the hospital. When the patient was sent up into my ward it could not swallow anything, and it was expected that the child would die of suffocation if tracheotomy were not immediately performed. The post-pharyngeal collection of pus was the cause of all the urgent symptoms, but how to get at it without danger to the little patient was the question. In this case it seemed to me that if I made an aperture through the mouth, the child might be liable to suffocation by the large quantity of matter escaping into the pharynx, and I determined to adopt the following expedient. I carefully made an incision, about half an inch in length, with a lancet through the sterno-cleido-mastoideus, thus exposing the fascia underneath it; I then thrust a grooved probe or director through the fascia, towards the back part of the pharynx, when a little stream of opaque fluid came trickling down the director. I then ran the dressing forceps along the grooved director, made an opening into the deep abscess, and let out three or four ounces of pus. The exit of the pus was aided by passing my finger into the child's mouth, and by pressing upon the posterior wall of its pharynx. The carotid artery subsided to its proper position, the breathing was immediately relieved, the patient lost all sense of suffocation, and some wine-and-water was quickly swallowed. The child left the hospital after six or seven weeks in a comparatively healthy condition.

I believe it would have been unsafe to have attempted to open this abscess in the neck, and close upon the spine, by any cutting or perforating instrument.

Oct. 1860.—This patient was seen three months afterwards, quite well as regards the abscess, and the spine consolidating.

Iliac Abscess.

A man came under my care at Guy's Hospital, having received a kick from a horse over the left hip, which broke the os innominatum, and drove a large piece of it inwards towards the abdomen. Subsequently an abscess occurred under the iliacus internus, and thence it descended into the thigh, behind the femoral bloodvessels in front of the hip-joint, towards the inner side of the thigh. He was suffering great constitutional distress, and it became necessary to open the deep and obscure abscess. Believing that it could not be safely reached by a knife or bistoury, I made an aperture on the inner side of the upper part of the thigh by cutting through the skin and fascia lata, and exposed the gracilis muscle. I then ran the grooved director through the gracilis into the deep and painful swelling, and opened the abscess with the dressing forceps. The patient was relieved at once, and there was thenceforward neither difficulty nor danger associated with the case.

Sub-gluteal Abscess.

A few years ago I saw in St. John's-wood, with a physician and a surgeon, a young gentleman, who had acute disease of the hip-joint, with deep fluctuation (abscess) under the gluteal muscles. The lad was very feeble, and dangerously ill, and it became necessary to relieve him. I made a small cut down to the gluteus maximus, not through it. I then ran a director through the gluteal muscles, and opened the abscess with the forceps without the slightest difficulty to myself, without any important bleeding or danger to the patient.

Sub-fascial and Sub-muscular Abscesses.

I have pursued this same safe plan over and over again in sub-fascial or sub-muscular abscess or abscesses formed upon or under the periosteum in the thigh. It has occurred to me many times in such cases, after dividing the fascia lata, to see the healthy muscles stand up boldly and clearly in the wound; and, instead of cutting through them, I have reached the abscess by running a director right through the muscles into the collection of fluid, and then introducing the dressing forceps in the way I have described. It is, I believe, impossible that any surgeon can foreknow the exact position of the descending branches of the circumflex arteries, or perforating arteries of the profunda, in a case of deep abscess of the thigh; so that when he plunges his knife into the deep swelling he can feel no certainty as to his being able to avoid bloodvessels or nerves. But if the plan which I have recommended be pursued, it is hardly possible that any such mischief or accident can occur; and I can add this satisfactory assurance, that I have not yet had a single case in which this method of opening deep abscesses has been followed by important hæmorrhage.

I have recently (October, 1860) seen a young patient, who a short time since had a deep abscess in the thigh, just above the knee joint. The surgeon in attendance opened the abscess by some kind of cutting instrument. Pus and arterial blood escaped from the opening, but the bleeding was stopped for a time by plugging the wound. A recurrence of sudden and profuse arterial hæmorrhage took place in a few days, which nearly destroyed the patient. It was then thought right to ligature the femoral artery at the upper third of the thigh, and the bleeding ceased from that time.

In the case of a patient having an abscess close upon the interosseous ligament in the forearm, if the attempt to reach it be made by cutting down upon it, it is extremely difficult, next to impossible, to ascertain previously the exact position and direction of displaced nerves, veins, or arteries; so it must be equally impossible, with certainty, to avoid wounding some of these important parts. But if you simply cut through the fascia so as to expose the muscle at the most prominent point of the swelling (taking care to avoid the course of the larger bloodvessels, which may be felt with the finger), and then thrust the grooved director through them down to the interosseous ligament, the matter will show itself by welling up the groove of the director, and the introduction of a dressing forceps will then complete the operation with safety.

I think I have now said enough of this operation. I have not brought it forward from any egotistical feeling, but simply for the purpose of showing in what manner deep abscesses may be opened with the greatest safety.

DR. PICK'S LECTURES ON MNEMONICS.—Dr. Pick, who is already so well known for his many instructive and interesting lectures, delivered in London and elsewhere, on a new and natural system for improving and preserving the mental faculties and facilitating the acquirement of knowledge, has just commenced a course at the Royal Polytechnic Institution. It was while engaged in physiological studies at Prague that Dr. Pick first systematized the art of memory, and he has been enabled to render that quality of the mind almost independent of physical organization. The system is founded on natural principles, by which facts, images, ideas, and numbers may be instantly and enduringly fixed in the mind. His method can be applied to the acquiring of languages, the study of anatomy, and other subjects. For medical students especially, who have to learn and to remember so much, it would prove especially useful. A practical illustration of his system, especially as regards the retention of numbers in the mind, at once shows the nature and extent of his method. He applies a test to his audience in showing how the association of ideas assists the memory. Many of our profession have attended his lectures.

A Lecture

INTRODUCTORY

TO THE

COURSE OF PHYSIOLOGY

AT

ST. THOMAS'S HOSPITAL.

BY WILLIAM BRINTON, M.D.,

PHYSICIAN TO, AND LECTURER ON PHYSIOLOGY IN, THAT HOSPITAL.

(*Concluded from p. 428.*)

THE purpose with which we study has already been pointed out. The means of physiological research may now be fitly alluded to.

We will suppose, for example, that the function or office of any particular organ or tissue of the human body is the subject of inquiry. Let us see what, in such a case, are the channels and implements of research.

Its *anatomy* or structure, as revealed by dissection, would obviously be the first series of facts to establish. A tooth, for instance, has a shape, substance, and position, which together indicate its office: a nerve sends all its branches either to a muscle (an organ of motion) or to a region of the skin (organ of sensation) respectively. Or a whole organism (like that of a fish or a bird) is plainly constructed with reference to the act of swimming or of flight. And though, from the comparative length of the epoch during which Anatomy has been practised, you might fancy that this channel of inquiry was almost exhausted as regards the human subject and the higher animals, yet this is by no means the case, even as respects the more constant of organs; while in the instance of those tissues which, like vessels and nerves, are more subject to varieties of distribution, the numerous and accurate dissections necessary to deduce the normal arrangement, and the degree and frequency of its variations, are at present far from complete.

2. *Comparative anatomy* would constitute the next means of research. In passing over the animal scale, we should find the organ supposed to be the subject of inquiry undergoing many modifications; in some creatures, perhaps, evincing a great increase of size and complexity, in others merging, through successive retrenchments of substance, and increasing simplicity of texture, into a condition in which we fail altogether to detect it. A particular nerve, for example, may, if it pass through a mass of muscle in a minutely branched condition, leave us in in doubt whether its distribution is to this motor organ, or to that sensitive surface of skin or mucous membrane by which it is covered. Comparative anatomy may, in such a case, decide the question, by showing a larger development of the nerve on the one hand, and its decrease and disappearance on the other, in parallelism with a corresponding increase or decrease of the tissue it supplies. Thus the portio dura enlarges in consonance with that enormous muscular development of the face which forms the elephant's trunk; and the gustative nerve is reduced to a filament in the comparatively tasteless tribes of birds.

3. *Disease* often affords us equally valuable physiological information. Certain functions of the organism are arrested or paralysed by a given malady during life. An inspection of the body after death reveals certain tissues as the seats of a lesion or destructive process. Other things being equal, the function before noticed to be arrested is probably that of the part observed to be involved in the lesion. Here, again, we may borrow an illustration from the nervous system. Anatomy traces the portio dura to the muscles of the face. Comparative anatomy points out that its variations of size concur with the varying development, in different animals, of those muscular structures of this part to which it is distributed. Disease frequently gives us examples in which the paralysis of these very muscles during life is associated with such a lesion of this nerve as can be verified after death. It thus affords conclusive evidence in confirmation of that derivable from the preceding sources.

Lastly, *experiment*, by means of which it is in our power artificially to vary the conditions of observation, adds a fourth implement of inquiry to those already specified. The mechanism of many parts of the body, for example, may be illustrated, and even studied, by the proper adjustment of apparatus which is either modelled after that of the organism, or borrows part of its structure from the tissues of the dead body. The subjects of respiration, circulation, and other functions, will be found to receive many illustrations of great value from researches of this kind. In other cases, the body of a living animal is made the subject of experiment, which, sometimes implying neither pain nor danger, amounts in other physiological inquiries to the infliction of agony and death in a manner which naturally makes one reluctant to employ it. Such experiments, indeed, it will be our object to collate and consider rather than to repeat or imitate; the more so, that the results they afford are often rendered equivocal or invalid by the circumstances which attend their infliction—by the agony, for instance, which deadens the sensibility of the unhappy creature to a degree such as suppresses all ordinary manifestations of feeling; or, conversely, provokes a series of movements, or of inflammatory and other changes, which mask the phenomena that would otherwise naturally ensue.

The evidence derivable from these four sources of course consists, in itself, chiefly of isolated observations, which can have little value unless the facts they include support some deductions or inferences. And these again, however naturally they seem to flow from such observations, we have to test rigidly by their mutual harmony and concurrence. If, to recur to our illustration, anatomy traced a given nerve to a muscle, while comparative anatomy alleged it to vary in development according to the development of a mucous membrane, and disease and experiment gave equally contrary phenomena as the results of its lesion, we should have to remain in doubt respecting its function.

Now it is the peculiar difficulty of Physiology that it not only permits more confusion of thought than most other natural sciences as to what is observation and what inference—what fact, and what deduction from fact—two divisions of every subject which it should always be our endeavour to keep as distinct as possible from each other; but especially that there is a singular difficulty in comparing its facts and observations with each other. In the simplest experiment on animal tissues there is so much diversity intrinsic to the different specimens of such tissues themselves, and so much more which is extrinsic or pertaining to the circumstances of such experiments, that a complete parallelism of observations is often impossible, save in the very largest and broadest facts; and even these not unfrequently diverge to an almost contradictory extent.

Such considerations, while they enhance the difficulty of our subject, and certainly go far to excuse the discrepancies its authorities often exhibit, especially suggest the use of a strict and accurate logic in the reasoning which alone can build up a system of physiology from the innumerable details now accumulated by the industry of many observers.

A system of physiology, however, is what I fear our science cannot as yet claim to be. Few, indeed, are the large and comprehensive theories it has at present to offer. But the conclusions which bind together, each its own limited number of important facts, are both numerous and invaluable. And I think you will find numberless deductions, which, though they may be severally of smaller or narrower import, nevertheless do collectively explain and illustrate a vast amount of detail.

And of this mode of approaching the subject I can only say, that while its further development and extension seems to be the great want of modern Physiology, it is especially your duty to adopt it. Only around such deductions and inferences can important facts be made to cluster in the majority of minds. Indeed, unless a superstructure of reasoning be founded on them, many of the details of Physiology neither deserve nor permit recollection. And while it would ill become any man to forego, in such a lofty subject, the higher faculty of reason, and remain satisfied with a mere burden on the memory, least of all would it be wise for a student of Medicine to do so. The study of causation in Physiology will well prepare you for the study of diagnosis in practice; and the difficulties of the lecture-room, properly encountered, will train you for the graver responsibilities of the bed-side.

One part of our subject deserves a more specific allusion, both from its own inherent importance, and from the system adopted here with reference to its study—a system, I venture to think, in strict consonance with the foregoing remarks. I allude to Microscopic Anatomy.

So great is the mass of details accumulated of late years on this subject, that its full consideration would alone occupy twice the time placed at our disposal by the Examining Bodies for the whole Physiological Course. But valuable as much of it is, there is much more with which it is neither necessary nor expedient that you should attempt to burden your memory. And even as regards its more leading and important facts, it is quite essential that they should suggest, rather than replace, that exercise of the reasoning or deductive process which can alone fructify dry details into true and useful knowledge.

In place, therefore, of descriptions of wearisome minuteness, of measurements which specify diameters to the thousandth of a line, and shades of granulation of bewildering closeness of resemblance, I should advise you to limit your attention to the cursory descriptions, and simpler standards of comparison, adopted in the following Lectures. All beyond this had better be matter of sight than of hearing, much less of reading. "Segnius irritant animos demissa per aures, quam quæ oculis subjecta fidelibus;" which proverb is, indeed, literally illustrated in this institution, as regards microscopic anatomy, by the admirable demonstrations of my colleague, Mr. Rainey, one hour of whose practical teachings you will find, believe me, of more value in this respect than any number of books or lectures.

I have said so much of the advantages incidental to the study of Physiology, that it might naturally be expected I should conclude with a word of warning as to the dangers which, like most other fruits of the tree of knowledge, it might be supposed at least exceptionally to imply. Popularly, indeed, its study is supposed to be beset with peculiar perils, amongst which materialism, infidelity, and a variety of other moral lesions, are more or less charitably enumerated by those who are certainly themselves above (or below) all suspicion of the physiological knowledge they distrust and depreciate. In these curious psychological studies, religious novels, there generally figures an exceedingly clever person—often a medical student—who is profoundly versed in Physiology and its kindred sciences, but who, alas! questions the infallibility of the clergyman of the parish on these matters: and gradually going on from doubts of an exegetic kind to downright infidelity, ends by coming to exemplary grief in the last or penultimate chapter.

It is, perhaps, but fair to conclude that the authors of these singular books have somewhere or other met with characters answering, in however distant a degree, to this stock description. It can hardly be envy which leads them to disparage, as a kind of "bloated aristocrat" of the intellectual world, the whole class of scientific men. We ought, indeed, to assume that there is a nucleus of fact in their statements; a feature or two, however distorted, in this wonderful caricature of humanity, which they delight to paint over with anticipatory flames, like the Holy Brotherhood of the Inquisition used to do with their victims.

True or false, however, the description no way affects this great proposition: that, in all ages of the world, the cultivation of natural science in general, and of this branch of it in particular, has been found in conjunction with a devout worship of the Great First Cause of all the elaborate structures of animal and vegetable life. To the names of Galen, Solomon, and Haller, which first rise in one's mind as illustrations of this rule, numbers of others might be added by a minute's reflection. But three so diverse in age, and race, and mode of study, may assuredly suffice to refute a calumny so threadbare as that of the wholesale perversion of scientific men. And I hope it is not irreverent to ask, whether a heavy responsibility would not attach to anyone, whether layman or priest, who should teach that He, who is the light of the world, lighting every man that cometh therein—He who, when He spake among men, rarely did so without using analogies which showed that the material world was regarded by Him as a fit object for our contemplation, capable of suggesting and enforcing the highest and holiest thoughts—has enjoined us to waste His precious gift, the light of reason; and to leave in darkness and obscurity, or to use only for the poorest and most fleeting of comforts and pleasures, the things which He has given us richly to enjoy? If the charge of impiety is to be flung recklessly about, may it not be retorted by asking, "Is there no unbelief, no atheism, in the theory, that a man can only defend his creed by rushing at every doubt, like a bull, with lowered head and shut eyes?"

So little of truth, indeed, is there in the notion that the study of Physiology favours scepticism in religious matters, that the contrary statement might be maintained with considerably more semblance of accuracy. A subject which continually reminds us of our ignorance should scarcely make us vain; or which perpetually tells of what nevertheless we cannot observe with any of our senses, to doubt of the existence of a realm which at present lies altogether beyond their inquiry. Nay, more, if it were desired to minister to a mind diseased in this its most important part, it would be difficult to specify any better intellectual discipline than the study of Life and organization. If the sight of the stars in the sky could seem to the mind of the great Napoleon a scornful but complete answer to the sceptics who reasoned around him in his voyage to Egypt; and if he, in unconscious imitation, could draw from this spectacle the same lesson which David had done thousands of years before; surely the transcendent mystery which a drop of standing water reveals to modern observation—the throng of shapes, structures, instincts, and habits, which jostle each other in this microcosm—amount to no meaner teachings, and afford no less certain proof of a Creator. The honest doubter, I should rather say, may find in Physiology what, so far as his doubts are really intellectual, and not moral, must tend to shake and remove them. And any exception to this rule would almost justify the suspicion that his study of the subject was of that superficial and scanty character which, though it may, in the technical phrase of student life, grind men for the College or Hall, will most assuredly fit them for nothing useful in this world or the next.

The charge of Materialism is more difficult to deal with, mainly because of the sophistical sense in which the word has been used, and the odium it has therefore come to convey. To parody the sturdy Welshman's answer to the anti-Germanizing clergyman who casually held forth in his parish, "Here, sir, the great danger is of 'immaterialism.'" The only decently scientific hypotheses, in other words, which represent the material and its antagonist theory, are both of them, so far as I dare venture to judge, as perfectly compatible with religion as are the Books of Euclid. Indeed, I question whether they are not quite compatible with each other—whether the difference be not in great degree one of terms or words, rather than of ideas. One side, for example—well represented by one of the most able physiologists of the day, Dr. Carpenter,—is inclined to assume the existence of a force or forces, so unlike anything we meet with in the inorganic creation—that is, so characteristic of Life—as to be fitly named *vital*. These forces ceasing at death, allow the substances they previously tenanted and governed to fall back, as it were, into the domain of the ordinary laws of matter, in obedience to which they now decay and disperse into the world around them. The other side, which I will instance by the illustrious Valentin, regard Life and Organization as sustained in great measure by the same laws as those which, in different degrees and modes of working, operate in the inorganic world. Declining to separate the physical and chemical phenomena of dead and living nature by a line of demarcation hitherto not definitely proved to exist, and confidently resting on the innumerable and undoubted facts which prove that such forces as heat, light, magnetism, chemical affinity, are every moment operating in the living body, it supposes that even the most peculiar and fleeting of these operations which we sum up as Life, are effected, in obedience to natural laws, by the use of forces everywhere present.

Of the theologian who should call this "Materialism," I would ask, "How does it affect revealed religion, or infringe our common creed?" Its supporters, in assuming that "the vital functions are the result of an infinitely wise plan of organization," do but modify, and indeed modify by exalting, our notions of the infinite wisdom they explicitly acknowledge. The materials, so to speak, they regard as fewer, simpler, more general, less heterogeneous, than had hitherto been imagined. Scientifically, they must only gain their position more fully by proving it more fully than they have yet done. But, theologically, if there be any difference, surely it is that the simpler the materials, the more unimaginable must be the skill and wisdom of the workmanship.

To balance between the two theories on physiological grounds is perhaps less easy and conclusive. A critical intellect can, indeed, generally find something about these hypotheses more or less constrained and inexact. They never quite fit the limbs of a growing science; and, to keep up this homely simile, Physiology, after limping uneasily about in them for a short time, soon treads them down at heel. The vitalist, for example, cannot question the share taken by inorganic forces in the ordinary functions; or the contrast between systemic and somatic death: between the death, for example, of the whole animal, and that death of its muscles which only comes on several hours after, and can be deferred and even removed by the injection of blood. The supporters of the opposite view,

on the other hand, must be compelled to admit that we are still possibly ignorant of some of the forces which most essentially minister to life; and that, of these unknown forces, it is not impossible some may be more or less limited to organized or living matter. Each theory is thus more attractive according as you choose to fasten your attention on the differences, or on the likenesses, of the forces concerned in the living and lifeless divisions of Nature. Each, however, is only provisional: and if the latter may be regarded as any way preferable, it is only because it seems to be perhaps the more accurate and useful, precisely where it is the more modest, of the two; because it implies fewer consolations or excuses for our ignorance, and holds out larger incentives to our industry.

ON A CASE OF GUN-SHOT WOUND OF THE FACE, CAUSING THE DESTRUCTION OF THE GREATER PART OF THE LOWER JAW;

RECOVERY, WITH CONSIDERABLE POWERS OF MASTICATION AND SPEECH.

BY HORACE SWETE, ESQ., M.R.C.S., Somerset.

ON the 23rd of June, 1859, I was hastily summoned to G. B——, a boy nine years of age, who had received a severe gun-shot wound of the face at half-past eleven A.M. Being at a considerable distance from home, I did not receive the message till the afternoon, and first saw him at seven P.M. I found him under the care of the family medical attendant, Dr. Hurd, of Yatton, lying on a table, presenting a most ghastly appearance, the whole of the face below the nose being apparently carried away from ear to ear. The venous hæmorrhage, which had been considerable, had ceased, the skin was cold and clammy, and the patient seemed in a moribund state. The following account of the accident was given me by Dr. Hurd. Owing to its having occurred shortly after most of the neighbouring medical men had started from home, no surgical relief could be obtained before one P.M., when Dr. Hurd arrived. He found the little patient lying in the garden in a pool of blood, in the care of a neighbouring clergyman, whose kind attention could not be exceeded throughout the whole of this painful case. The boy's lips, or what remained of them, had been moistened with brandy, and reaction attempted by warm applications. Dr. Hurd, having removed him into the house, succeeded in checking the hæmorrhage, and inducing a considerable amount of reaction. It appeared the patient had been playing in the garden with the servant-boy, aged twelve, who presented a gun loaded with dust-shot, and fired at his face at a distance (as was afterwards proved by experiment) of not more than four feet. The charge entered the left side of the face, and passed out in front of the right ear, carrying away with it the greatest part of the lower lip and jaw, and the whole of the chin. Several pieces of bone and teeth were picked up in an adjoining field, at a distance of ten yards. The patient endeavoured to crawl to the house, but fell on a dungheap, about twelve paces from the place where he was shot.

On our removing him upstairs to bed and examining the wound, we found the external parts completely carried away, from the left external angle of the mouth down to the neck, including the chin and extending to the aut-helix of the right ear, and removing the right half of the upper lip; the teeth in the upper jaw and the whole of the alveoli on this side were absent; the masseter was laid bare; the lower jaw was shot away at the angle, leaving a long jagged piece of bone, and showing the dental vessels and nerves hanging bare and torn; the facial artery was also torn and the external carotid laid bare; the mylo- and genio-hyoid muscles were hanging loose on the neck; and the tongue was split laterally, the tip being gone, and presenting a trifid appearance. On the left side, about an inch of the ramus of the jaw and one molar tooth remained, and a jagged piece of the lower edge of the body.

The dotted lines on the accompanying engraving show the extent of the original injury.

I removed the jagged portions of bone with the bone-nippers, and dissected away the loose ends of the shattered muscles, bringing up the lacerations with two sutures. The right side was so much injured that little more than trimming could be attempted.

The only opinion we were justified in giving the relatives was the prospect of speedy death, if not from secondary hæmorrhage, at least from the amount of sloughing that was to be expected at no very distant period. No shot could be detected in the wound: they must have entered in a solid mass, and produced the effect of a bullet or fragment of shell, rather than that of ordinary shot.

June 24th.—He seemed easy; tolerably free from acute pain; his bowels were open.

25th.—Inflammation extending round the edges of the wound, which are considerably everted; he can swallow without much difficulty, though he is not able to articulate. Diet, beef-tea, &c. Lotions of chloride of soda to be frequently applied to the wound.

25th.—Inflammation decreased; extensive sloughing commenced, the wound becoming very offensive. The heat of the weather being great, considerable relief was obtained by covering the outside of the window with green muslin, and keeping it constantly wet. The patient was thus able to have the window open without being annoyed by flies. The following

dressing was ordered, and continued for the ensuing week:—Chloride of lime, one drachm; lard, one ounce: to be applied three times a day, spread on lint, and kept constantly wetted with the chloride-of-soda lotion.

28th.—Some more bone removed. Glycerine to be applied with a camel's hair brush to the parts of the mouth that cannot be covered by the dressing. The bowels have not been opened since the 24th. An enema of castor-oil was given, followed by a cathartic enema, which brought away a quantity of dark feces.

29th.—The sloughing has nearly ceased; the wound looks well, but the edges are considerably everted.

30th.—Granulations tender and flabby; a bandage was passed round the neck so as to endeavour to make some distinction between the neck and chin.

July 4th.—Alum lotion to be used instead of the chloride dressings. By careful straining on the surrounding parts, an incipient chin has been formed. Syringing out the sanious pus from the wound has given great relief.

From this time to the 18th, by the use of vulcanized india-rubber bands, (the French scentless ones were used,) the face has become more shapely. An apparatus was worn, consisting of a head-piece and chin-strap of linen, connected by the india-rubber bands. To-day he got up. He attempts to articulate, but cannot be distinctly understood. He derived considerable satisfaction by having a series of words and sentences written on a slate, so as to be able to point to what he wished to say.

12th.—Zinc dressings were applied over lint steeped in the alum lotion. A half-mask of gutta percha, lined with spongio-piline, was worn to keep up the dressings. He was allowed out in the garden.

13th to 19th.—Extensive exfoliation of the alveolar process of the upper jaw and palate has taken place.

19th to 22nd.—The cavity of the wound is now considerably smaller. Can speak more plainly, though he never attempts labials.

August 4th.—He is rather feverish; the wound looks red and inflamed, with a tendency to erysipelas; talks very much better. To have cathartic enema; his diet to be lowered.

11th.—The wound looks healthy again.

14th.—He is much improved now; he can talk tolerably plain, and gives the following account of himself:—"I can chew meat, talk, eat cake, plum-pudding, and kiss."

Sept. 25th.—He has cut two molars on the left side, and can make considerable grinding motion with them. The loss of saliva is very great on the right side; he speaks clearly. All the wound is quite healed.

From this time to the present date (Sept. 6th), he has continued to improve. His general health is excellent, and though obliged to have his chin tied up with a handkerchief, he manages to enjoy himself much as other children. The engravings show his present state, though when his mouth is shut the chasm does not appear so large; indeed, whilst resting his face on the right hand, I was able to have a photograph taken, for his relatives without showing any marked degree of deformity. I have great hopes, as he grows older, to make it still less by a Taliacotian operation, and the aid of mechanical dentistry.

In the treatment of the case, the chlorine lotions and dressings were of the greatest advantage, whilst the bringing up of the loose skin of the face and neck, so as to form a new chin, was entirely due to the use of the vulcanized bands exerting a constant and equable pressure on all sides.

The medical treatment was conducted by my friend, Dr. Hurd, who occasionally gives him an aperient or saline dose, as there is now and then a tendency to erysipelatous inflammation, owing to the constant dribbling from the salivary fistula. I have still hopes of relieving this as soon as the case is fit for further operative interference.

Wrington, 1860.

ITALIAN HOSPITALS.—The spirit of charity is waking up at Naples. A great number of persons, especially ladies, visit the wounded, and all take something to relieve their wants. These attentions are so much the more prized that the Royal Government had left the administration of the hospitals, like all the rest, in a most deplorable condition. Volunteer sick-nurses also abound. But it is not the same at Caserta. M. Kergomard, who has just arrived from that place tells me that the hospital of Caserta contains 300 wounded, and there are only five women, all persons of good family, to attend them. One only of these belongs to Caserta, and none to Naples.—*Naples Letter.*

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla est alia pro certo nascendi via, nisi quam plurimas et morborum et dissectionum historias, tam alienas proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Prooemium.

ST. BARTHOLOMEW'S HOSPITAL.

CALCULUS IN THE BLADDER; LITHOTRITY—THE STONE CRUSHED IN FIVE SITTINGS, WITHOUT CHLOROFORM; GOOD RECOVERY.

(Under the care of Mr. SKEY.)

WITH the desire of fully illustrating the removal of stone from the bladder by the process of crushing, we place on record a few examples in which this proceeding was attended with complete success, in patients presenting some differences in the nature and general symptoms of their disease.

As contrasted with lithotomy, the operation of lithotrity is comparatively of very recent invention, and has been rather extensively employed of late years. Its present state of perfection has been justly attributed to the labours of Civiale and Amussat in France, and of Brodie and Liston in this country. Many amongst the present generation of practitioners will remember when, but a few years back, it was the invariable custom to cut for stone—it was the operation then performed in our hospitals. Now a fair proportion of cases are submitted to crushing instead. Although the majority of cases, in public practice at least, are still subjected to lithotomy, this may depend, to some extent, upon the desire of exhibiting to pupils a more brilliant operation; for it must be acknowledged that, in point of display, the act of crushing a stone sinks into insignificance when contrasted with the performance of lithotomy? There is, perhaps, another reason why the latter is preferred, which is mentioned by Mr. Coulson in his standard work on the two operations: it is this—that "most surgeons perform lithotomy sufficiently well, yet when they come to lithotrity judgment and skill seem to have abandoned them. The dexterous lithotomist becomes a very indifferent lithotritist." This may explain the determined hostility which M. Velpeau has ever shown towards lithotrity, in consequence of the want of success which has attended his practice of the crushing operation. Of his first twelve patients thus treated, no less than three died; in four he had to abandon the operation, not being able to terminate it; and five were cured. On the other hand, those who have, like ourselves, seen him perform the cutting operation, will admit the great skill he has always displayed, as well as the attendant success. Mr. Coulson states in his work, that Amussat, even so far back as 1835, declared that he found lithotrity applicable to three fourths of the calculous cases in his extensive practice.

We shall not, on the present occasion, enter into the subject of the suitable cases for crushing, nor of the indications for and against it, nor, again, into the statistics, which have yet to be worked out. There is this much to be said, however, in regard to the last, that most of the lithotrized cases are picked ones; whilst, on the contrary, lithotomy is performed on nearly all the other cases which present themselves.

Mr. Fergusson observes, in his "Practical Surgery," that, in the present stage of its history, we do not possess sufficiently authentic data by which to determine the safety of lithotrity as compared with lithotomy; but there need be no doubt of its applicability, and even superiority, in many instances. "In my own practice, I now find that I perform lithotrity more frequently and more successfully than in former years; but generally the cases occur in private practice. Perhaps the reason of this is, that among those who do not seek hospital aid it is more generally known, that if the surgeon is applied

to at an early date there is a better chance of the case proving suitable for this proceeding."—p. 788.

In the following case, for the brief notes of which we are indebted to Mr. W. H. Farrington, house-surgeon to the hospital, the stone was about as large as a walnut, and altogether it was a most favourable one for this plan of treatment, which was followed on five occasions with complete success; that is, every remaining fragment was got rid of after the last crushing.

In March last, John B——, aged thirty-five, was admitted into Abernethy ward, when the following history was obtained:—Up to twelve months ago he had good health, having suffered no pain nor inconvenience whatever in his urinary organs. From that time he dates his present symptoms, which have been gradually increasing. He now suffers from extremely painful and frequent micturition, followed by much straining. His urine, after standing, becomes thick and ropy. He has pain in the glans penis, and, in fact, all the symptoms of calculus, with chronic inflammation of the bladder. A sound being introduced, a calculus was readily detected, and was supposed to be about the size of an ordinary walnut.

March 31st.—Without the aid of chloroform, Mr. Skey introduced the lithotrite and crushed the calculus twice. After the operation the man passed several small pieces, and next day the vesical irritation had become much less.

On April 7th Mr. Skey repeated the operation, crushing the stone several times. Afterwards the patient voided a large quantity of fragments. The operation was again performed on the 14th, 17th, and 21st of April, being followed each time by the passage of many fragments and relief to the irritable state of the bladder.

On April 28th the patient expressed himself as quite well, and able to hold and pass urine naturally. Urine quite clear. The sound does not detect the smallest piece of calculus.

October 6th.—Five months have elapsed, and no fresh symptoms have appeared. There were five crushings within a month. The calculus consisted of lithic acid.

UNIVERSITY COLLEGE HOSPITAL.

OLD DISEASE OF THE BLADDER; NO URINE PASSED FOR YEARS EXCEPT BY THE CATHETER; CALCULUS; LITHOTRITY SUCCESSFUL.

(Under the care of Mr. HENRY THOMPSON.)

THE subjoined case is remarkable and somewhat exceptional, on account of the successful application of lithotrity to a patient in whom there was total inability to expel the fragments, owing to complete loss of power or "paralysis" of the bladder, a condition held by most, if not by all authors, to be a fatal objection to the employment of this operation. Every particle was removed by washing out the bladder with tepid water. The sittings were therefore made short, and only a small quantity crushed at a time, to prevent undue embarrassment from lodging of *débris* at the neck of the viscus. The consequence was, that such blocking-up never took place, and the result was perfectly successful.

J. B——, aged fifty-seven, a tall and well-made man, first applied to Mr. Thompson as an out-patient in June, 1858, with the following history:—He describes an attack of inflammation of the bladder, in 1845, as his first experience of any disease of the urinary organs. He recovered from this after some time, and although suffering from some undue frequency in passing urine, had no subsequent attack until 1850, when he was the subject of complete retention of urine, and the daily use of the catheter was necessary afterwards for some time. A similar attack succeeded in the spring of 1853, and another, the most severe of all, in the autumn of the same year. For nearly three weeks all his urine was removed by the catheter; he lost considerable quantities of blood, and for three years possessed some, but always imperfect, power of emptying his bladder. In 1856, he lost all control over his bladder, and could evacuate no urine except by the catheter, which he now learned to pass for himself; and from this period until the present, with the exception of an interval of six weeks in 1856, when he partially recovered the power, he has passed no urine whatever except by a gum catheter (No. 9), which he introduces with ease six or seven times in the twenty-four hours.

Mr. Thompson examined him, and found no obstruction either in the urethra or at the neck of the bladder; a full-sized instrument slipped easily into the latter; and the prostate was in no respect enlarged. The bladder is capacious; there is a moderate degree of chronic inflammation of its mucous membrane, as seen by the urine; otherwise this fluid, except being slightly alkaline, is healthy; there is no albumen, nor are any renal casts seen. Every now and then, without apparent cause, he passes a very considerable quantity of blood; hæmorrhage continues for two or three days, and then gradually disappears. It does not seem to be produced by the catheter, which he nevertheless is continually passing, but occurs without any known cause.

Mr. Thompson sounded him carefully for stone, but could detect none. He follows an active employment, that of drawing an invalid chair, and takes a good deal of exercise daily in this way without much inconvenience, although he suffers considerable pain at times in the region of the bladder.

A number of remedies were tried—strychnia, steel, the infusions, &c. From no internal medicine did he obtain any benefit for his complaint, although his general health improved. Some months afterwards he was sounded again, and again without success.

In June, 1859, he became the subject of one of his old severe attacks of cystitis, without any obvious cause. Much pus and blood appeared in the urine, and it was necessary to pass the catheter ten or twelve times a day; the pains also had increased in severity. On these symptoms subsiding, Mr. Thompson, strongly suspecting the presence of calculus, sounded him a third time on the 20th of June, and on this occasion found one, apparently of moderate size. He was admitted to the hospital, and after watching his case a short time it was determined to crush the stone.

July 2nd.—Having been an inmate for a few days, the first operation was fixed for to-day; but an unexpected attack of hæmorrhage came on, no interference having been attempted, except his own passing of the catheter, which he requires about eight times in the twenty-four hours, being wholly unable to pass a drop without it.

10th.—All signs of blood having disappeared, and the general and local condition of the patient having much improved, Mr. Thompson introduced the lithotrite, and at once found, and speedily crushed, a stone of firm texture. No chloroform was administered; the patient exhibited no signs of pain. The *débris* adhering to the lithotrite was phosphatic. During the following three days phosphatic *débris* was passed by washing out the bladder.

13th.—No irritation having ensued, Mr. Thompson again gave the patient a sitting, the duration of which was about two minutes. A little fever ensued this time, but disappeared in a few hours.

19th.—Third operation.

23rd.—Fourth operation. Much *débris* removed.

25th.—Fifth operation. A small fragment remaining was crushed.

29th.—All the *débris* appeared to have come away. On sounding, nothing could be detected.

During the next week he was discharged. He had lost all his pains; the urine was clear; the power of the bladder remained the same as ever.

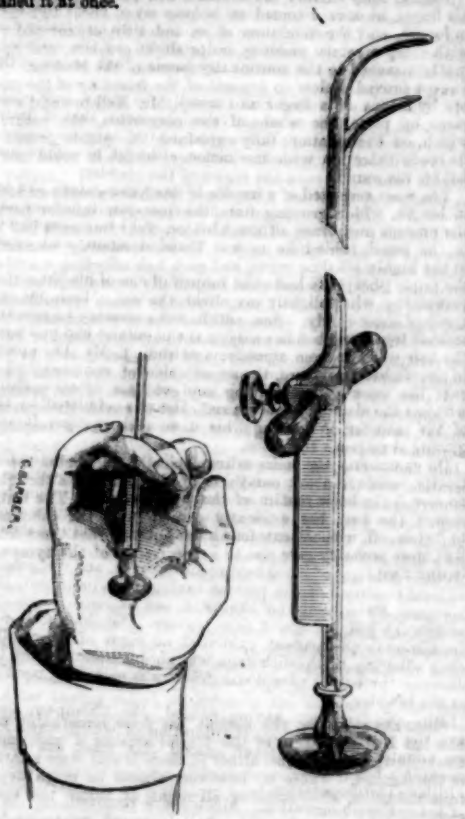
October 15th.—Called to report himself. He is perfectly free from all signs of stone; has passed no blood since he left the hospital, and the urine is perfectly clear. He is better than he has been for many years, and is greatly improved in strength and appearance. He is actively following his old occupation, without any pain or inconvenience.

SMALL CALCULUS IN THE BLADDER OF A BOY; LITHOTRITY SUCCESSFUL, AT A SINGLE SITTING.

(Under the care of Mr. HENRY THOMPSON.)

R. L——, aged ten, has been the subject of retention of urine frequently during the past month or two, with severe pain, and urine loaded with pus and mucus. The catheter has been frequently employed to relieve him. He was sent up from the country to be under Mr. Thompson's care on the 11th of last September. He lies with his knees drawn up on his abdomen, his left hand holding a very elongated prepuce, and his countenance exhibiting marks of considerable suffering—the characteristic aspect of a young calculous patient. Urine flows from him almost constantly, and he rarely makes efforts to pass it, and then only with extreme pain; hence incontinence both night and day. The bladder has evidently become greatly distended from his prolonged voluntary retention. On the night of the 13th complete retention came on, and Mr. Thompson was sent for. Passing an instrument, the calculus

was found impacted in the neck of the bladder. The instrument being withdrawn, Mr. Thompson passed his very small lithotrite, the size only of a No. 6 catheter, the effect of which was to displace the calculus, and render it free in the cavity of the bladder. He then caught it, and, finding it very small, crushed it at once.



The lithotrite is one adapted only for very small stones, and, with no great power, is applied by simple pressure, not by means of a screw. Mr. Thompson stated that he should, in common with most surgeons, much prefer lithotomy, from its known constant success in children's cases, unless the stone should prove to be so small that it might be crushed by simple pressure. In such case he thought it preferable to spare the child the more formidable operation. It has often been our lot to see lithotomy performed for a minute calculus—no larger than an apple-pip, for example; and it appears certainly better to employ a proceeding so simple as that now described. The instrument, at all events, forms an excellent sound, while, at the same time, an exact measurement of the size of the stone can be taken. If it prove to be the third of an inch or half an inch in diameter, it will undoubtedly be safer to cut for it; but if it is obviously smaller than this, a smart pressure of the hand will crush it, and the fragments come away readily enough. On the contrary, if a stone of too great a size is crushed, the fragments, being large and perhaps angular, will be forced into the neck of the bladder, and stop there or in the urethra,—the form and activity of the organ in children being peculiarly liable to cause this to occur. Such an accident must be avoided by care being taken never to crush any but the smallest calculi, and for them it appears to be a much simpler and less hazardous proceeding than lithotomy.

The little patient suffered from considerable irritability of the bladder for some days after, as he had done before the operation; but the character of the urine soon improved, the pain disappeared, and he rapidly regained the appearance of good health. The nocturnal incontinence was the last irregularity persisting, but ultimately it occurred only about once in five or six nights.

GUY'S HOSPITAL.

CALCULUS IN THE BLADDER FOR TWO YEARS; LITHOTRITY SEVERAL TIMES; SUCCESSFUL RESULT.

(Under the care of Mr. BIRKETT.)

IN the following case the patient had symptoms of stone for two years, and passed by the urethra a fragment, which evidently had been detached from a larger one. His urethra was capacious, the bladder not irritable, and the stone of very large size, but soft in texture. Lithotrity was performed several times, and occasionally fragments were impacted at the orifice of the urethra in the intervals. With the exception, however, of an attack of orchitis, nothing occurred to interfere with the satisfactory termination of the case.

W. T——, a very healthy-looking man, aged fifty-seven years, of robust frame, active and temperate habits, applied to Mr. Birkett in November, 1859, on account of symptoms of stone in the bladder. About one month before, he had passed from the urethra, after much suffering, an oval calculus, at one end of which a rough surface seemed to show that it had been broken off from another. Unequivocal indications of the presence of a stone in the bladder existing, Mr. Birkett passed a sound, and instantly struck one. Having experienced oftentimes the "attacks of his bladder," he considered that he must have had a stone more than two years. He had had medical advice, which temporarily relieved his sufferings. The urine he passed was occasionally turbid from mucus, and the bladder was irritable; but the urethra and prostate gland appeared to be quite healthy. The urethra admitted a sound of the largest size freely.

After some delay the patient was admitted in Lazarus ward, and, after a suitable preparation, Mr. Birkett broke the stone with a lithotrite in February, 1860. The blades of the instrument when grasping the stone were separated an inch and a half. It was easily crushed. The operation was performed without chloroform, and the patient did not complain of the pain it occasioned. Some fragments and sandy *débris* passed away, and the operation was repeated four times, at intervals of a week, until March, when the right testis became swollen and painful. This affection was treated in the usual manner, and it soon subsided.

Lithotrity was repeated on four successive occasions, and at last all the fragments were discharged. During the time of the operations, alkaline medicines and ferruginous tonics were administered. Very large fragments often passed without any trouble, but occasionally they were impacted near the orifice of the glans penis, and required to be removed. The patient was not sufficiently careful to preserve all the *débris*, and several fragments were lost in consequence. However, from the amount collected, the stone must have been of very large size. In chemical composition it belonged to the class of uric acid.

Provincial Hospital Reports.

LANCASTER INFIRMARY.

A BUNDLE OF FINE HAIRS, TWO INCHES LONG, GROWING FROM THE WALLS OF THE FEMALE BLADDER, AND COVERED WITH CRYSTALS OF TRIPLE PHOSPHATE; SUCCESSFUL REMOVAL BY DILATATION OF THE URETHRA.

(Under the care of Mr. HALL.)

THE occurrence of hair in the bladder is a very peculiar and most unusual circumstance, and when observed in females always excites suspicion of having been introduced by the patient herself. Such instances are known to have actually occurred. On the other hand, examples have been witnessed in which the hair undoubtedly came from the bladder, and there was good reason to suppose actually grew from the mucous membrane of the viscus itself; such, at least, would appear to have been the case in the following example, for the notes of which we are indebted to Mr. Frederic Meggy, one of the pupils of Guy's Hospital, who brought the subject before the Guy's Pupils' Physical Society. The symptoms exhibited by the patient were unusual, and simulated those of urinary cal-

culus. The urethra was accordingly dilated by Mr. Hall, and a friable bundle of very fine hairs, about two inches long, was removed piecemeal with the finger and scoop. The concretion appeared to have been attached to the mucous membrane at its posterior inferior part, and it is believed that the hairs grew from that portion of the bladder; and although the patient is relieved for the present, there is a probability of a return of the complaint as growth proceeds. Each hair was covered with a multitude of minute crystals, which resembled under the microscope a mass of barleysugar; and they were, besides, extremely brittle.

On referring to Mr. Coulson's work on "Diseases of the Bladder," we find that he mentions several instances of hair in the bladder in both sexes. Thus Sir Hans Sloane relates the case of a brewer, who passed long hairs matted or woven together, with great pain, free from encrustations. Mr. Powell gives the case of a lady who passed little masses of hair mingled with a peculiar viscid substance, partially encrusted with calculous matter, in whey-coloured urine. A third case is that met with by Dr. Wallace, of hair voided several times with the urine; and after death a stone, of the size of a goose's egg, was found in the bladder, from parts of which hairs had grown out. It was thought that the hairs voided during life grew out of that stone, for reasons that are given in Mr. Coulson's book, and to which we must refer the reader.

The following case is, perhaps, rarer than any of these, because the hairs appeared to have grown from the membrane of the bladder itself, which suggests the possibility of some peculiarity during the fœtal life of the patient, or of some anomaly connected with ovarian disease in contact with the bladder. There is at the present time a female patient in the Middlesex Hospital who has passed several small calculi both before and since a recent operation for the removal of a good-sized stone, by Mr. de Morgan; and the nuclei of all these consist of hair. At first it was supposed that hair might have been introduced into the bladder, but this has been proved not to be the case. The origin of the hair is presumed to be an ovarian cyst in connexion with the bladder.

Agnes W——, aged fifty, living at Overton, was admitted September 12th, 1860. She is married, and the mother of nine children, the youngest of whom is eight years old. Has always been weakly, but has not previously suffered from any severe disease. Seven years ago she began to complain of a smarting pain on passing her urine, which deposited a quantity of red gravel. After some months this passed off, but was succeeded by a gradual change in the clearness of her urine, which went on increasing until about eighteen months ago. There was always a thick deposit of pus after the urine had stood all night. At this time she began to complain of a new symptom —namely, a bearing-down, aching pain whilst the bladder was filling, succeeded, after emptying that organ, (which act was accompanied by severe smarting,) by such a fearful attack of an "indescribably horrid" pricking pain in the urethra, that it generally left her in a state of syncope for ten minutes after. This pain was always relieved by hot fomentations to the parts. With this there was great irritability of the bladder, so that she was sometimes up seven or eight times in a night to pass urine. She had at times suffered from a sudden stoppage of her urine whilst in the act of passing it, lasting for ten minutes or so at a time. Since the attacks of pain first appeared, there have been some slight intermissions for periods of a few weeks. Last Christmas, after a longer intermission than usual, she passed a mass of about the size and length of an index finger, which she describes as resembling in appearance cotton waste. She was then without pain for a fortnight, after which she passed another mass of the same size and shape. Each time that one of these masses came away she had gone an unusually long time without emptying the bladder; then, on attempting to do so, there was a stoppage for ten minutes, relieved by a sudden exit of the urine, carrying the mass with it. She is naturally of a costive habit, sometimes going six or seven days without a motion, and she always noticed that the pain was worse when she had been some days without her bowels being relieved. There has been no appearance of catamenia for the last three or four months.

On admission, she is of middle height, light hair and complexion. There is a marked red line round the gums, but she never suffers from cough. She is highly nervous. Body very well nourished. The day after admission, the symptoms being so strongly indicative of stone, Mr. Hall proceeded to explore the bladder. He first introduced a female catheter, and at once detected what appeared to be a large rough calculus; but, on introducing an ordinary steel sound, there was not the slightest evidence of any foreign body in the viscus. Again, when on the operating-table, both Mr. Hall and his colleagues were equally unsuccessful with the sound; but on resorting to the female catheter, the small apertures at the side of the instrument immediately grated harshly against a calculous mass.

Having fully dilated the urethra, Mr. Hall, on introducing his finger, at once detected an oblong mass, about two inches in length, and the thickness of an index finger, covered over with sharp crystals, yielding under slight pressure, and apparently attached to the mucous membrane of the bladder. The forceps proved useless on account of the friability of the mass; but by means of a finger and scoop, Mr. Hall brought away, piece by piece, the whole of the concretion, the nature of which, on examination, fully explained the puzzle caused by its ready detection with the catheter, whilst it could not be felt by the sound.

The mass consisted of a bundle of fine hairs about two inches in length, which growing from the posterior inferior part of the mucous membrane of the bladder, their free ends had lain in the pouch behind its neck. These, constantly macerating in the highly alkaline urine, and each hair affording a nucleus, the triple phosphate had most beautifully crystallized on them, presenting, when slightly magnified, the exact resemblance of syrup of sugar-candy. Some of the hairs were separate, others matted together; but in every case the radical third or half of the hair was free from crystals; and thus, being able to yield to the slightest pressure, the smooth side of the sound passed over the mass without giving any evidence of its presence; whereas the elasticity was yet sufficient to enable the apertures of the catheter, in passing over it, to give out a rasping or grating sensation.

On examining the hairs microscopically, the bulbs are distinctly visible in about one-third of the number, although in no case is the little rootlet of the bulb present. The brittleness of the hair has evidently caused it in the other cases to break off without extracting the bulb, so that those left in will most probably give rise to a recurrence of the symptoms in due time.

Since the operation the patient has done remarkably well. She has had no return of the fearful attacks of pain, nor of the stoppage of the urine, although there is still some smarting in the passage. There is, however, almost as much deposit from the urine, after standing all night, as before the operation.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 29TH, 1860.

DR. A. B. GARROD, F.R.S., PRESIDENT.

DR. SALTER read a paper on

THE NATURE AND CAUSE OF THE RESPIRATORY MURMUR.

After having adverted to the great importance, in a practical and pathological point of view, of correct notions with regard to the physiology of respiration, especially of the sounds of healthy breathing, the author mentioned a few of the opinions as to the cause of the respiratory murmur that had been entertained by distinguished authorities. Of these the chief were the following:—

M. Beau* had advocated the view that the respiratory sound heard at the surface of the chest is not produced in the lungs, but at the pharynx; and simply depends on the transmission to those organs of the pharyngeal sounds attending the entrance and exit of air through the pharynx.

Dr. Spittal† had advocated similar views, only he made the seat of the sound the glottis instead of the pharynx.

Laennec considered its immediate cause to be the entrance of air into and expulsion from the air-cells.

Dr. Herbert Davies assigned the murmur to air-friction in

* Arch. Gén. de Médecine. 1834.
† Edinb. Med. and Surg. Journ., vol. xli.

the entire bronchial system. He thought the inequalities produced by the cartilaginous rings had something to do with its production, and that the relative loudness of inspiration was due in part to the splitting of the currents of inspired air by the angles of junction of the tubes, and in part by the resistance the contractile lung tissue offered to its ingress.

Skoda was evidently of opinion that the bronchial vibrations contribute, by their conduction through the ramifying columns of air, to the respiratory murmur; but he was not very definite, and gave no details of the mechanism of the transformation of the one sound into the other.

Dr. Walshe attributed the sound to the entrance and exit of air to and from the air-cells, and believed that the terminal portions of the bronchial tubes were also concerned in its production. He believed also that there was a greater resistance of the textures during inspiration, and that this contributed to the excess of inspiratory over expiratory sound.

Dr. Blakiston, failing to recognise any other adequate cause for the greater loudness of inspiration than of expiration, had adopted the opinion that the ultimate bronchiæ contract at each inspiration, as an adjuvant power to help the air into the air-cells, and in this way produce a greater rush of air, and therefore louder sound, at inspiration, and, relaxing at expiration, allow the air to pass noiselessly out.

The author remarked that, in discussing this subject, what we had to explain was a sound of a certain peculiar character, audible (as he was inclined to believe), in the tranquil and unconscious breathing of a healthy adult, *only at inspiration*, but immediately becoming audible at expiration when the breathing was at all forced, and changed in a certain way, or entirely destroyed, by certain disturbing conditions. The theoretical difficulty which beset the question depended on having to offer an explanation consistent with these peculiar features and circumstances of the sound; the practical difficulty, on our being unable to imitate artificially those conditions which generate the sound in the living body. It was certain that the sound must be a surface sound, and that its seat must be a very thin layer immediately beneath the pulmonary pleura, because it reaches the ear without conduction by the lung. That the lung is not concerned in its conduction was evident, because the moment even a thin portion of the pulmonary structure acquires conducting power by condensation we hear sounds that before were inaudible.

After having called attention to the anatomy of the lung-elements subjacent to the pleura, the author combated the idea that it was possible for the air-cells themselves to be the seat of the respiratory murmur; but showed that in the intercellular passages and the ultimate bronchules the conditions for the generation of a respiratory murmur existed; that the law of the branching of the air-passages involved a continual retardation in the movement of the air in the ultimate recesses of the lung-structure, and in the opposite direction a continued increase of rapidity of air-rush, and consequent air-and-wall friction, and its attendant sound, in passing from the air-cells towards the larger bronchial tubes. The actual limit beneath the pleural surface at which this fine-tube sound would cease to be audible was uncertain, as the limit of the conducting power of the lung was unknown.

The author then raised the question whether the sound, *generated* at the point at which it was audible—that is, in the sub-pleural stratum of the minutest air-tubes—was the only source of the respiratory murmur, and stated his belief that the sound of which we know the whole bronchial system to be the seat (under the name of tracheal and bronchial breathing) must also contribute to its production. It was impossible that the vibrations in the larger trunks should not be conducted to the ultimate bronchial ramifications, and contribute their quotum to the sound audible at the superficies of the chest.

Dr. Salter recognised the difficulty which the great unlikeness of these two sounds, the bronchial and respiratory, would offer to the view that the one contributed to the other; but he thought that the transformation might be explained and the difficulty removed by the consideration of the following modifying circumstances which converted the one sound into the other:—

1. The reduction of the calibre of the tubes.
2. The repeated change of direction of the tubes.
3. The softening effect of the intervening film of lung.
4. The multitude of sources of sound.
5. The influence of convection in restricting the sound to inspiration.

All these modifying circumstances were considered in detail.

The excess of inspiratory over expiratory sound (when expiratory sound existed at all) was shown to be due in part to the impact of the in-rushing air against the promontories of the bronchial wall where the tubes branch. The way in which this would increase the air-and-wall friction in inspiration, and its absence in expiration, were shown by diagrams.

One circumstance to be accounted for, although it did not bear on the immediate question of the respiratory murmur, was the greater loudness of expiration in bronchial breathing. This was shown to depend on the law of bronchial ramification, which made, in effect, the aggregate bronchial channels tantamount, in a direction towards the orifice, to a continually narrowing stream. This involved a greater air-friction in expiration, and therefore a greater sound.

Other differences between the respiratory murmur and bronchial breathing were also explained, such as the difference of rhythm; and it was shown that the movement of the air in the bronchial tubes was always rather behind that in the lung parenchyma, and that the "respiratory" rhythm was converted into the bronchial by inserting a pause between inspiration and expiration, lengthening the expiration, and shortening the post-expiratory rest.

The author thought he had said enough to show that the distant bronchial sound, conducted and convected to the surface by the ramifying columns of air that have a sub pleural distribution, may contribute to the inspiration-sound of ordinary breathing; at any rate, he had stated and explained his belief, and shown that the differences of character of bronchial and vesicular breathing were no argument against the latter owing something of its raw material of sound to the former, inasmuch as those differences were just such as the modifying influences in operation would produce.

In conclusion, he expressed the opinions at which he had arrived in the following summary:—

1st. That the air-cells are structurally incapable of producing a respiratory murmur by their slight dilatation.

2nd. That the respiratory murmur is essentially a fine-tube sound.

3rd. That the lobular passages and ultimate bronchial radicals are probably its immediate seat.

4th. That while the lung parenchyma, from its heterogeneous constitution, completely muffles all sound, the unbroken column of air in the bronchial tree is an excellent conductor; that thus the respiratory murmur has a double cause, and is in part the result of air-and-wall friction at the spot, and in part the bronchial sound of the larger tubes (although essentially modified) conducted by the unbroken column of air to the ultimate bronchial twigs.

5th. That the restriction of the sound to inspiration (excess of inspiratory over expiratory sound) depends mainly on convection, but probably also in part on the great amount of air-and-wall friction produced by the impact of the air at the points where the tubes divaricate.

Dr. J. B. SANDERSON said,—It being admitted that the vesicular murmur is produced by the friction of air against the mucous surface, it will be heard most where that movement is most rapid. At the commencement of the inspiratory expansion of the thorax, the first change that occurs is the expansion of the vesicles; the next is the rush of air along the bronchial tubes towards the vesicles, which commences and is most rapid at their terminations. It is at their terminations, therefore, that the sound is produced.

Some further discussion took place, and the Society adjourned.

Reviews and Notices of Books.

Guy's Hospital Reports. Edited by SAMUEL WILKS, M.D., and ALFRED POLAND. Third Series. Vol. VI. pp. 531. London: Churchill.

LIKE most thriving things, these Reports grow bigger as they grow older, and if they do not grow better, too, they at least continue to be as good as ever. We have more than 500 pages from the Borough this October. How many are we to have next session? Much further the force of binding cannot go—at least not report or magazine binding. Mr. Bryant opens the work with an exordium of more than seventy pages devoted to the "Surgical Diseases and Injuries of the Nose, Larynx, Thorax with its Contents, and of the Organs of Circulation." The article is characterized by good practical common sense, and its advocacy of plain, straightforward sur-

gery. Dr. Wilks has about fifty pages "On some of the Diseases of Children." Like his colleague's, this is a good article; but it struck us as less fresh and original than much of that which springs from the same source. We have no fault to find with its details; on the contrary, we entirely agree with most of what Dr. Wilks tells us, but we seem to have known it all before, and something more too. Mr. Arthur Durham enunciates some new views regarding "Sleep." Amongst them, he insists that the pressure of distended veins upon the brain is not the cause of it; that the veins are *not* distended during sleep, and when they are, the result is different from ordinary slumber.

"During sleep the brain is in a comparatively bloodless condition, and the blood in the encephalic vessels is not only diminished in quantity, but moves with diminished rapidity. ..... Whatever increases the activity of the cerebral circulation, tends to preserve wakefulness; and whatever decreases the activity of the cerebral circulation, and at the same time is not inconsistent with the general health of the body, tends to induce and favour sleep."

We are heartily glad to find Dr. Habershon tired of his rhodomontades about mercury, and getting back once more to observation and to common sense. His paper upon "Cases of Hydatid Disease" is a valuable addition to help our judgment in an obscure part of clinical medicine, and is well worthy of perusal by the practical medical man. Dr. Taylor treats us to an elaborate memoir upon "Facts and Fallacies connected with the Research for Arsenic and Antimony, with Suggestions for a Method of Separating these Poisons from Organic Matter." We have some "Additional Notes on Diabetic Cataract" by Mr. France, the perusal of which should precede that of the memoir by Dr. B. W. Richardson on the "Synthesis of Cataract," now publishing in the *Journal de la Physiologie* of Dr. Brown-Séquard. The memoir of Mr. Poland, "On Rupture of the Popliteal Artery and Popliteal Aneurism," forms a most useful surgical paper for reference, giving as it does the history of not less than sixty-nine cases. It is a credit to the industry, to say the least, of the author. The paper by Mr. Durham, "On Misplacement and Mobility of the Kidneys," is practically useful in reference to the diagnosis of abdominal tumours, whilst his remarks upon "Hermaphroditism" are not devoid of interest.

Dr. Odling favours us with an account of Guy's Hospital well. The average daily consumption in this almost town within itself is not less than 13,000 gallons. In 1858 it was determined to sink a deep well within the precincts of the Hospital, which should yield a quantity of good water, sufficient to supply the entire institution. It was commenced in the winter of 1858, and was completed in the summer of the following year. Its total depth from the surface is 297½ feet, proceeding above 100 feet into the chalk. With an occasional exception, the water rarely rises to within less than 65 feet from the surface, whence it is raised into two tanks by an eight-horse steam-engine, which serves the double purpose of working the well-pumps and the machinery employed in the laundry. One tank holds 16,000 gallons, the other, 8000.

"The supply of water, though fully sufficient for the wants of the institution, is not so ample as was originally anticipated. At first the pumps might be worked continuously for eight, or even ten hours, without exhausting the supply. At present, the exhaustion is readily effected by two hours' pumping. The well, however, refills itself in the course of an hour, and will then allow of another hour and a half's pumping, and this alternate resting and pumping may be carried on throughout the day. The water supplied by the well is bright and colourless to the eye, brisk and pleasant to the taste. Its temperature, when fresh from the well, was found to be 54°, that of the atmosphere being 65·5°.....This well-water belongs to the class of soft waters; its hardness, as determined by Dr. Clark's soap-test, is only 5·5 degrees, and this by boiling is reduced to 1·5 degrees. The average hardness of the Thames water, as formerly supplied to the Hospital by the Southwark and Vauxhall Water Company, is 14 degrees, which by boiling for a quarter of an hour, is reduced to 6 degrees, and even this water is justly considered to be a very excellent one."

This new well-water of Guy's Hospital is characterized by the large amount it holds of chloride of sodium, and of carbonate and sulphate of soda. Dr. Odling observes, that in the present imperfect state of our knowledge, the more probable explanation of the source of the carbonated alkali in the deep water of London lies in recognising the decomposition of an alkaline silicate, chiefly silicate of soda, existing in the strata above the chalk.

Mr. Birkett continues his contributions to the practical surgery of New Growths, or Tumours. The subject of "Cysts" is illustrated in the present series. Drs. Taylor and Pavy make some remarks upon the physiological effects of, and poisoning by "White Precipitate;" and Mr. Salter concludes the volume by a report upon a case of "Ovarian Tumour, containing Teeth, Hair," &c.

Du Cancer et de sa Curabilité. Par le Docteur A. BUEZ, Ancien Interne des Hôpitaux de Strasbourg, &c. Avec Quatre Planches. pp. 96. Paris: Baillière.

WHEN we first cast our eyes upon this essay, we imagined it to be an *ad captandum* venture, to be placed in the same list as includes those disreputable and knavish publications with which the so-called "cancer-curers" of the last few years have sullied the stream of the more popular medical literature. We were glad to find ourselves mistaken. The work is the product of a well-informed, honourable physician, and is simply intended for the scientific practitioner. It is true Dr. Buez is enthusiastic, and expresses himself rather warmly upon some points; but, since he is young, and the nature of cancer is a very litigated matter, he may well be pardoned his determinate expressions. Our author is a strong opponent of what is termed the "specificity" of cancer. He maintains that

"There is not such a thing as a 'cancer-cell'—that is to say, a cell differing in form and size from the physiologic type, and by which alone cancer is characterized.

"The cancerous tumour is formed by a union of the cellular elements having their *analogues* in the normal tissue of the animal economy: these elements assume *multiple forms*—have *variable characters;* each cell contains one or more nuclei, some free nuclei swimming in the blastema. The most general character of these cellules is a tendency to *proliferation*."—p. 32.

Whilst admitting the existence of a "predisposition" to cancer, Dr. Buez nevertheless maintains that primitively the latter is a purely local disease, but which, when once developed, may give rise to a diathesis and a cachexia by absorption of cancerous elements at the period of softening of the tumour. The idea of the absolute incurability of cancer is therefore a very erroneous and disastrous one, in the opinion of the author. The cure may be difficult to accomplish, and may perhaps be but rarely truly effected. It is very certain that in advanced stages of the malady there frequently exist a state of general cachexia and the presence of multiple tumours in different parts of the body, so that neither science nor art can be appealed to with profit.

"But, surgeons, it is you whom we will hold responsible for this state of things; nor shall we be able to find words sufficiently severe wherewith to blame your inaction or your timidity at the period of the first symptoms of the disease!"

Dr. Buez strongly advises removal of the tumour, therefore, in its earliest stages; the degree, seat, and form of the growth determining whether removal shall be accomplished by the actual cautery, the potential cautery, or the knife, or by all three together. In Dr. Buez' essay will be found a good and concise critique upon the doctrines held relative to the histogeny of cancer, and some very beautiful and accurate representations of the different types of the so-called cancer-cell.

Things not Generally Known Familiarly Explained: Curiosities of Science, Past and Present. 1st and 2nd Series. 2 Vols. By JOHN TIMBS, F.S.A. London: Kent and Co.

THE author of these interesting volumes is well known from his many valuable contributions to general science and litera-

ture. As the editor of "The Mirror" and of "The Year-book of Facts," Mr. Timbs has conferred an immense advantage upon the public. The "Curiosities," he informs us, are a portion of the results of a long course of reading, observation, and research necessary for the compilation of thirty volumes of "Arcana of Science, or Year-book of Facts," published from 1828 to 1858. The subjects, illustrated by numerous and important facts, embrace most of the branches of natural and experimental science, and there is scarcely anything connected with these that is not touched upon. Mr. Timbs possesses the rare faculty, but one so necessary for a compiler, of clear and accurate condensation. However short may be the article on any given subject, he is never obscure, nor does he ever apparently omit anything essential respecting it.

To enumerate the various subjects upon which he treats, would be to present almost a complete catalogue of things which are not generally, but which ought to be, known. The great utility of such a work as that before us lies in the influence which it must necessarily exert for the removal of dangerous and often ridiculous prejudices. But it is not only to the ignorant that the "Curiosities" will be of service, for the best-informed may derive instruction as well as amusement from them.

To one article only, on a subject which has a professional as well as a public interest, will we specially direct attention. It is that which relates to chloroform. In the compass of a few pages, the author gives a succinct and accurate account of the discovery and value of this important agent. He endeavours to prove that its beneficent influence is attended with only an almost infinitesimal amount of danger, and that a person may submit to its employment with as much comparative safety as a traveller may enter a railway carriage to prosecute a journey. We cordially recommend Mr. Timbs' volumes to our readers.

The Essentials of Physiology. By M. W. HILLES, formerly Lecturer on Physiology at the Westminster Hospital School of Medicine. pp. 328. London: Renshaw.

THIS little pocketful of physiology contains a surprisingly large amount of information in a small space, and, what is not generally the case with the class of "crams," its statements are perfectly correct. The work seems admirably suited (as it is no doubt intended) for the physiological examination at the College of Surgeons, and with that view includes a large amount of what has been aptly termed "common-sense physiology"—such as is found in Mayo and other works of that class. The author by no means, however, ignores modern investigations, and more particularly lays under contribution the translation of Valentin by Brinton; but he does not allow the great facts of the science to be so overlaid with microscopic details that the student becomes unable to elicit the necessary information. The recent researches of Kölliker and Brown-Séquard are done full justice to, while those of older authorities retain their time-honoured and honourable positions. Although perhaps of too concise a character to be used as a text-book by a student commencing his studies, this volume will be found very valuable by one who is brushing up his knowledge with the view to an examination, and for that purpose we strongly recommend it.

The Levant Quarterly Review of Literature and Science. Edited by R. F. FOORE, M.D.

WE have received, and read with no small pleasure, this, the first number of a British periodical printed and published in the City of the Sultan, under the superintendence of a physician already well known for his enlightened zeal in the cause of professional truth. In the opening article, Dr. Foote draws attention to the great changes which of recent years have taken place in the social life of Constantinople, and to the still greater changes which are obviously impending, and will rapidly be effected, without fail. Notwithstanding the inertia of an effete government, and the apathy of the Turkish character, the dry bones of society have been shaken, and a spark of light and life has begun to flicker and work through the apparently inanimate mass. It behoves all who know the blessings of truth and liberty to fan the feeble struggling flame, and we are therefore glad to find that our countrymen are astir in the good work. Meetings have been held, and societies formed, to promote rational and healthful pursuits amongst the European residents, and to create a taste for them amongst the native population. There is the British Literary and Scientific Institution, founded last April, with our ambassador, Sir Henry Bulwer, as president; also, the Constantinople Mechanics' Institute at Haskoui, a village on the Golden Horn, about four miles from the Galata Bridge, and near the Ottoman Arsenal; and there is the Levant Quarantine Association, which has already done good service to the shipping interest, by remonstrating against the abuses of an antiquated system.

Cordially wishing every success to the work, we would suggest to its able Editor whether it might not be well to devote a sheet or so of each number to a *résumé* of the quarter's most prominent *sociological* events, thus combining the character of a magazine with that of a review.

Letts' Medical Diaries.

THESE little books maintain their well-earned character of usefulness and convenience, and are well worthy the patronage of members of the medical profession.

IDIOPATHIC TETANUS.

To the Editor of THE LANCET.

SIR,—In the report of a case of idiopathic tetanus, published in your journal of the 27th ultimo, Dr. Rogers invites some of your readers to throw a light upon the causes in operation that led to the attack.

In the first place I would venture to say that this was a well-marked instance of spinal meningitis, of which the symptoms of tetanus were the exposition. This fact is established by the post-mortem examination of the spine. In the second place, that the inflammation of the spinal cord and membranes was owing, as the patient stated, to exposure to wet and cold in his occupation as a street-sweeper; that checked perspiration, and consequent blood-poisoning, was the proximate cause of the disease, aided, in all probability, by the diseased condition of the kidneys, which were disabled for the performance of their vicarious functions, when those of the skin were arrested.

I should not have ventured to offer this short explanation of the cause and nature of the case, if it were not for the purpose of directing the profession to the great value of the vapour-bath in the treatment of all cases of blood-poisoning occasioned by checked perspiration, complicated with kidney disease. The kind of vapour bath is of importance: not that commonly in use in hospitals and infirmaries, in which the head of the patient is excluded; but that in which the head is included, and the patient breathes a vapour of the same temperature as that to which the rest of the body is exposed, and perspires freely without quickening the circulation. It would not be far wide of the truth to assert, that more than one-half of the out-door cases which come under the notice of hospital, dispensary, and infirmary medical officers, are caused by poisoned blood occasioned by arrest of the functions of the skin and kidneys, and that the patients would be speedily and safely relieved by placing them in a vapour chamber, constructed to contain several at a time, and followed by a tepid shower-bath to wash off the perspiration. I tried this plan very successfully in St. Giles's, and I have no doubt of its producing satisfactory results if practised elsewhere.

I am, Sir, your obedient servant,

Montague-street, Bloomsbury, Nov. 1860. J. PIDDUCK, M.D.

UNIVERSITY COLLEGE.—The Longridge prize of £40, for general proficiency in Medicine and Surgery, has been awarded to Mr. William John Smith; and the Liston Gold Medal, for reports and observations on the surgical cases in the hospital, to Mr. William Hickman.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 10, 1860.

IT is not because we presume that any arguments of ours, or any appeals to the common sense and common experience of mankind, are likely to have any influence with people who believe in the production of physical phenomena by purely spiritual agency proceeding directly from weak mortals like themselves, that we recur to the degrading delusion of Spiritualism. The world of the spiritualists is not our world. Theirs is an era of mysticism, of credulity, and legerdemain—an anachronism removed by centuries from the age of pure science and reason, and, may we not add, true religion? To us, the interest of the subject is mainly psychological. Its analogies to the delusions of the lunatic asylum and to the various moral epidemics which from time to time spread amongst persons of defective cerebral organization or ill-cultivated intellects, are features which the physician cannot ignore. Those who look with observant eyes upon society must have been struck with the remarkable fact that the various eccentricities of the human mind which have lately been manifested are often espoused by the same individuals. Thus the rampant Socialist becomes a ready convert to Homœopathy, and is equally prepared to adopt the heresies of Spiritualism; and if a new vagary yet more extravagant were started, it would find supporters in the same class. If you see a person afflicted with Homœopathy, you may with great confidence predicate of him that the development of his complaint will be manifested by an outbreak of Spiritualism; and that the prognosis is much against a return to sound reason. It may indeed be said that globulism, which calls upon us to believe in the therapeutical efficacy of matter subdivided to evanescence or annihilation, is part and parcel of Spiritualism. It is known, for instance, that if we go on diluting or dividing a grain of gold by trituration with successive portions of sugar, the best microscope and the most delicate chemical tests will fail to detect the minutest molecule of gold long before the most potent dilutions of HAHNEMANN have been reached. In fact, there is a stage when a molecule of gold may be seen in one portion of the mass operated upon, and not in another; which shows that the limit of divisibility has been attained, and that in imputing a physical virtue to those portions into which no metal has passed is to transcend the bounds of ordinary science and to take a leap into the abyss of Spiritualism. Spiritualism, indeed, has nothing more absurd than this to propose for our acceptance. Faith, not evidence, is all in all. This the delusionists themselves admit. Thus mediums constantly fail in their most interesting revelations when too closely watched by persons who are accustomed to scrutinize evidence. Why do they fail? What is the "disturbing influence?" Surely that spirit is feeble, and ought to be held of little account, which suddenly becomes impotent when the need for success is greatest, when triumph would be most signal. But what is the explanation given for this inopportune failure? It is usually this. No sooner does a sceptic declare his presence by expressing his doubts and difficulties, and by insisting upon ascertaining all the conditions of the experiments to be performed, than spirits and mediums are paralysed. A "disturbing influence" is suddenly discovered; and we are told that spirits refuse to appear until that "disturbing influence" is removed. Can impudence go further? This pretence is simply a stratagem to get rid of any witness who is not already constitutionally inclined to believe not only what he sees, but also such explanation of what he sees as the performers choose to impose upon him. The utter falsity of this plea of "disturbing influences" is clearly demonstrated by the following considerations. In the first place, it is not the mere presence of a sceptic that is so offensive to the invited spirits; for if you keep your countenance and conceal your scepticism, the exhibition will probably go on to the entire satisfaction of the dupes. Secondly, we are repeatedly told by ardent converts, and with a most imposing air of confidence, that they went to the first and perhaps to several *séances* decided sceptics, determined to doubt, until they were overwhelmed by evidence; and they further tell you that they took every precaution and used due vigilance in controlling the proceedings. Yet the spirits came, went through the programme, and wrought willing conviction. The plea, then, is simply an impudent lie. Nor has it even the recommendation of novelty. Spirits always have been shy and reluctant to appear before sceptics. The spirits that *Glendower* boasted he could call from the vasty deep would not come when the sceptical *Hotspur* taunted the mystic Welshman to produce them. A sceptic, in short, is to the modern spirit what Chanticleer was to the ghosts of our grandmothers. The scene in "Hamlet" is parodied. The cock crows—the ghost vanishes: the sceptic utters a profane question—the spirit refuses to leave the immaterial world. Really it is too gross to be ludicrous.

Without wishing to suggest that mediums and their dupes are all of them fit subjects for medical treatment, we have no hesitation in saying, that many of them furnish additional illustrations of pathological and psychological phenomena with which medical men are very familiar. The counterpart of the wretched medium we find in the half-deluded and half-designing hysterical patient, who persists, under positive suffering, and for no conceivable motive beyond the love of notoriety and sympathy, in simulating some extraordinary or impossible disease. The dupes of the medium are in a similar state of mind to the crowds of vulgar sympathizers with the hysterical sufferer. The terms in which they resent the quiet suggestions of the doctor, that all may be accounted for by deceit on the one hand and credulity on the other, are identical. Indeed, to hint to a man that he is the victim of trickery, is to wound his *amour-propre* in the tenderest point. Henceforward you must expect no candour from him. His sole object is now to damage your authority, to decry your acquirements, to denounce you as a materialist, an atheist, as everything that is abominable. Even when the whole trick is exposed, you are accused of inhuman indifference to sufferings, and, perhaps, the plainest proofs of imposture are denied. All will remember the case of a young woman in Suffolk, who pretended that she existed for weeks without food. She had hundreds of believers, who were disgusted at the proposal of the doctors to subject her to rigid observation in an hospital ward. Quite recently a physician was gravely consulted by the employers of a servant-girl, who day after day continued, to the astonishment and with the deepest commiseration of those around her, to dis-

charge large pieces of coal from her eyes. Several ounces of this material were shown as indubitable testimony to the fact, that the poor creature—who, of course, had no motive for deception—was generating coal somewhere in her head, and getting rid of it through her orbits. She was closely watched, it was stated, and the pieces of coal seen to come from her eyes! How account for it? Great offence was given by suggesting that the girl held a clandestine communication with the coal-cellar, and that fragments were furtively pushed under the eyelids, ready for evacuation in public. It was so cruel to doubt the poor girl. Why should she inflict such injury and pain upon herself? In this tale, which the experience of every medical practitioner can match, we see a perfect homology with the delusion of Spiritualism. Familiar with cognate infirmities, the physician, of course, knows how to appreciate the manifestations of mediums. Fond of the marvellous, and ignorant or careless of the physical laws by which the Creator has ordained that the universe shall be governed, there are always grown-up children who delight in deceiving and in being deceived, and who prefer the most irrational solution of a mystery, just as their juniors in years are fascinated in proportion to the startling extravagance of a romance.

We should like to apply the theory of "disturbing influences" to the full practical extent. Mediums and spirits would not exist if there were not dupes. That much is clearly proved. It follows that the latter are directly responsible for the maintenance and propagation of the delusion, or fraud, or manifestation, or whatsoever the thing may be called. The delusionists indulge in speculations which are essentially subjective, and have no real foundation in fact. To see a table dance has, indeed, an objective origin; but to conclude that the table is made to dance by the agency of spirits—which is the whole marrow of Spiritualism—is a purely subjective idea. The two things have no consequential connexion whatever. The first is a physical fact; the second is a subjective delusion. Let this be well understood, and Spiritualism vanishes like a dream.

With our medical experience to guide us, we do not, then, venture to hope that Reason will avail in overthrowing delusions that rise, like exhalations, from the rank and malarious soil of Folly. Just as there are desert places and irreclaimable swamps on the earth, so there are human minds that defy instruction, that are impenetrable to the teachings of common sense, or which, like the pedantic fop reproved by WELLINGTON, are "over-educated,"—that is, crammed with learning they are incapable of digesting and assimilating.

ON Tuesday evening next the Royal Medical and Chirurgical Society holds its first meeting. The business of the various Metropolitan Societies may then be regarded as in full operation. It is remarkable that at the commencement of a session there is usually a great dearth of communications, and consequently a difficulty exists in obtaining papers to be read or discussed. It is equally remarkable that towards the close of the session papers and cases are sent in in such numbers that there is not only not time to discuss them, but scarcely an opportunity of reading more than their titles or very brief abstracts of their contents. That by this mode of proceeding the profession sustains a considerable loss cannot be doubted. It is true that the unread papers considered worthy of the honour are published in the "Transactions;" but the discussion of their merits by the assembled Fellows is impossible. The very object, then, for which the Society was founded is thus defeated. As the remedy for this unfortunate state of things is so easy, it is a matter of astonishment that the constant appeals from the President, and the reiterated remonstrances of the press, have hitherto failed to produce an alteration. The ill consequences of delay in forwarding suitable papers for the consideration of the Fellows are manifested also in another way. The Council are occasionally compelled to receive communications which, from their length, abstruseness, and unpractical character, would, under other circumstances, have either been read in abstract or altogether rejected. Gentlemen desirous that their papers should receive full attention and criticism will do well to take a hint from these remarks.

It is somewhat marvellous that the Pathological Society still continues to attract a numerous audience, when it is recollected that the morbid specimens exhibited at its meetings are frequently of no practical import, and when they are, are too generally mere repetitions of, or additions to, facts which have already been sufficiently demonstrated. Transcendentalism in morbid anatomy, as worked by the microscope, may occasionally tend rather to confuse than to convince. Microscopic anatomy, within proper limits, is calculated to be of essential service to the progress of knowledge; but long, elaborate, minute, and tedious "Reports" upon specimens exhibited to the Society are not only useless and unnecessary, but occupy the time of the Society, and disgust the members, who are unfortunately compelled to listen to them. These reports, no doubt, are often creditable to the industry of the observers; but what is their practical value? We fear but little.

The Obstetrical, the Medical, and the Epidemiological Societies are not obnoxious to this serious reproof. The various branch Societies of the metropolis have also steered clear of so grievous an error.

Medical Societies were established for the purpose of promoting practical knowledge. Discussion is the life-blood of these assemblies. Take away discussion, and the Society becomes a *caput mortuum*. Practical knowledge is not incompatible with the closest and most rigorous observation, but this must not degenerate into questionable minutiæ or elaborate speculation. If the science and practice of medicine are to be improved by the Medical Societies, it must be by their members following in the footsteps of the great pioneers of the profession. Theories, if they are to be of value, must be founded upon facts: this is the whole spirit of inductive philosophy. This truth, however, appears to be ignored in some of the papers and discussions which form the staple of some of the Medical Societies. Men found theories on the shadow of a fact. So it is recorded of a dreamy and enthusiastic painter, that he once saw the ghost of a flea, and sketched it.

In these remarks we have no desire to limit or control the full development of inquiry upon any subject which may have a practical or a useful bearing upon the progress of our science. We wish to confine the papers and discussions which occupy our Medical Societies within their legitimate bounds. Without obtruding themselves unnecessarily upon the attention of an assembly of practical men, "discoverers," "theorists," and "speculators" have full opportunities at the present day of communicating in other ways their views and opinions to the profession.

THE careful attention of intending candidates for the medical degrees of the University of London is invited to the new Regulations affecting them just decreed by the Senate, and returned with the sanction of the Home Secretary on Thursday last. They are of unusual importance; but we believe that on the whole they will prove favourable to the candidate.

TOBACCO IN CAMP AND COLLEGE.

THE deepening conviction that the habitual use of tobacco is a source of physical and mental degeneration has steadily obtained a firmer hold of the public mind since the thorough exposition of the opinions of the medical profession in the columns of this journal. To that discussion the late manifesto of Sir Benjamin Brodie must be considered as a supplement, affording an authoritative sanction to the conclusions at which we arrived in summing up the debate. In this country of free discussion and free action, the changes wrought by conviction are worked out slowly and spontaneously by individual process of resolve. Across the Channel, where *facta non verba* is the rule of the empire, the opinions elicited by the great English controversy have borne fruit in deeds. It will be remembered that certain statistical results have been obtained at the Ecole Polytechnique and other public schools and colleges, attesting that the smokers were also the dunces, and that the intellectual as well as the physical development of the students was checked by the use of tobacco. The Minister of Public Instruction has published a circular, addressed to the directors of schools and colleges in France, forbidding the use of tobacco and cigars by the students. The Minister of Public Instruction and the Préfet of the Seine are said to be "unceasing in their exertions to remedy the evil." As Paris alone contains 29,000 pupils, the edict applies to a large population.

It would be well could the authorities of the English colleges and universities decree the same abstinence for all students, in residence or otherwise under control. There are two classes of men in England, who at this moment are addicted to frightful excess in tobacco-smoking, and suffer the evil consequences in depression, debility, hebetude, and nervousness. These are students at college, and officers in barrack, garrison, and camp. The latter especially smoke incessantly, beginning early in the day, and continuing till the night has fallen. The dulness of barrack life, which incites to the excess, is deepened by the habitual depression which tobacco in the end produces. The depressed and debilitated condition of numbers of these young men, who, from such depôts as the camp at Aldershott, visit London, has long been the subject of observation amongst the surgeons who are called to treat their complaints, and have the opportunity of comparing their nervous force with the standard of civil life. Nowhere are the evils of tobacco-smoking more rampant than in the camp and the college. Is it impossible that higher authority should intervene to ameliorate their condition?

A NEAPOLITAN OUTRAGE.

THE Neapolitan special correspondent of THE LANCET has recently incurred a penalty such as plain-speaking sometimes suffers at the hands of tyranny, in a country where the traditions of oppression are still vital, although at the instance of those who invoke the name of Liberty in their struggle.

Dr. Wolfe had excited the indignation of persons in authority at the hospitals of Garibaldi by frankly describing in this journal the faults of administration, the surgical deficiencies, and the general defects of the hospitals which he visited in Sicily and in Naples. That service was the greatest which he could render to the cause. His description was copied into the leading and other journals here; it evoked fertile sympathy in this country, and hastened and swelled the tide of benevolence which has borne to the Sicilian and Neapolitan hospitals from these shores gifts of which the value has been lately described by the *Times'* correspondent as inestimable. All that Dr. Wolfe narrated he saw. But to see and to speak were held to be an offence by persons who felt his statements to convey a personal reflection. Gradually, reforms have been effected in the hospitals, especially in the medical and dispensing departments; and in the Hospital St. Sebastiano, which is under the direct management of an English surgeon, the greatest exertions have been made to obtain a good organization. But the latest and most authentic accounts, from independent sources, show that even here—under the direction of an English army surgeon, with a *commandante* so vigorous that she does not hesitate to clap a revolver to the breast of anyone who incurs her indignation, peculation—the vilest fraud, filth, and cruel neglect are rampant. Dr. Wolfe had deserved the thanks of all interested in the welfare of Garibaldi's soldiers by his fearless and intelligent criticism; he had earned the personal gratitude of the General for his devotion and services during the Calabrian expedition, and while acting on the personal staff of Garibaldi. But his titles to esteem were, to those who felt aggrieved by his honest boldness, incentives to malice and defamation. Occasion was taken, therefore, to raise the most stupidly false charges, and Dr. Wolfe was put under arrest in the absence of General Garibaldi. Before a council of war, charges were alleged that he was an adventurer, with forged credentials both from this journal and from the Ladies' Garibaldian Committee; that he was not a qualified physician; and, finally, that he had calumniated the Italian surgeons in his letters to THE LANCET. Of course it was not difficult to prove the manifest absurdity of these falsehoods, and Dr. Wolfe was at once honourably acquitted. He has gone to the head-quarters of General Garibaldi, where it is not to be doubted that he will receive the ample apologies and amends due to a man whose services have been rewarded by ingratitude so signal, and whose character has been attacked by calumnies so mendacious.

SURGEONS UNDER FIRE.

THE Chinese campaign has throughout been honourable to the medical services of the Army and Navy. The hospital ships despatched were models of comfort and completeness. The army panniers were admirably devised, and sanitary considerations have never been lost sight of. Hence, during the long preliminary delay which characterized the opening of the campaign, the health of the troops was excellent; it was not inferior to the standard of civilians in healthy employ. The accounts of the recent fight have been equally honourable to the medical services. They have shown efficiency, skill, and personal gallantry. Amongst the incidents of the battle we read that, in the attack on the Great Northern fort at Taku, a gunner was wounded near the counterscarp of the outer ditch. A lad of fifteen, on the Indian medical establishment, a soldier's son, by name Fitzgibbon, was on the field as hospital apprentice, attached to the 67th. Without a moment's hesitation, he rushed to the artilleryman, and dressed his wounds under a tremendous fire. In so doing he was severely wounded in the arm; but the bullet has been extracted, and the wound is healing. A more gallant lad never lived. His character is excellent, and he well deserves some promotion. At one time one of the batteries on the south side of the river, which it was supposed had been silenced in the morning, opened fire on the field hospital, and several shots fell within a few feet of the tent, where an artilleryman was at the time having his leg amputated by Dr. Rennie, of the Royal Artillery. One shot is described as passing between Drs. Woodroffe and Birnie, of the Royals, who were standing within a couple of feet of each other. Dr. Telfer, the superintending surgeon of the division, at once had the hospital tents taken down, and, the coolies and mules being put into requisition, the medical department was

moved beyond the range of fire. This prompt and judicious measure prevented further mischief. But the cool indifference with which these gentlemen treated the *stink-pots* and gingalls was highly characteristic of the accomplished Æsculapian.

In describing the general arrangements of the medical staff, everyone uses language of praise. They are thanked in General Orders, and the correspondent of *The Times* says that nothing could be better than the measures adopted for getting the wounded off the field on the 21st. They were taken at once to an airy, comfortable hospital, and when visited on the same evening, their wounds had been dressed, and they were well supplied with beef-tea, sago, and all sorts of medical comforts. The arrangements reflected great credit on Dr. Muir and Mr. Thompson, attached to the 2nd division, and on the medical staff. All the wounded are now on board ship. The health of the army is reported to be not so good. A fortnight's encampment in the mud had produced diarrhœa, dysentery, and ophthalmia, and there had been two cases of sporadic cholera, both ending fatally.

PHYSICIAN AND BOOT-BLACK.

THE training of the medical neophyte just now occupies a prominent place in the deliberations of the Medical Council, and the thoughts of all of us. Of course everyone forms for himself an opinion on these questions. Most of us have thoughts that a more perfect collegiate training and a more uniform and severe standard of general attainments in the liberal arts would produce a generation with minds more uniformly fitted to cultivate the fields of medical science with vigour and profit, and to uphold the dignity of the medical profession in the social estimation. Individuals differ. There are some who belong to "the old school," and are opposed to such new-fangled notions, and generally to all nonsense, implying the march of intellect. A very eccentric individual—shall we suppose him an awkward humourist?—furnishes his quota of opinion as to the proper training of budding physicians by an announcement, which we extract from the advertising columns of a contemporary:—

"Medical assistant wanted, by a general practitioner—a young man, age eighteen to twenty, who has been used to dispense medicines and assist in bookkeeping, and who would be willing to attend to the door and make himself useful. Apply by letter to M.D., at Mr. Woodwell's, 62, Berners-street, Oxford-street."

No doubt this would be a very comprehensive initiation into the art of making oneself generally useful, and in this sense is to be considered as an excellent introduction to a profession of such general utility as that of medicine. It is a creed with some few—let us hope a very few—that it is the part of the medical practitioner to be all things to all men; but we never before heard of an enthusiast who included in the list of agenda, "attending to the door," blacking boots, running errands, and the *et cetera* which are to be perceived lurking under the vague conclusion of this announcement. We hope that no one will endeavour to ascertain who is the M.D. at Mr. Woodwell's, 62, Berners-street, Oxford-street, who so modestly shrouds his requirements under an anonymous veil; for if he is not a humourist, we fear that he would be thought a scurvy fellow, and would lose in respect what he might gain by publicity.

SIGHT AND REASON.

SOME singularly foolish fictions have been founded upon the late narration in the pages of THE LANCET of a very interesting case in which an operation restoring sight to a blind lunatic was followed by an amelioration in the intellect, attributed to the vivid appeals to the brain made through this new avenue of sense. That the restoration of a sense which, above all others, stimulates the brain and feeds the intelligence, should have affected favourably the reason of this sufferer, was an occurrence which was not less intelligible than it was interesting. A foolish fellow took it into his head that, since the patient had taken chloroform for the operation, the cure must have been attributable to the use of that agent, and rushed into print to announce his idea. Of course, under the circumstances, it might as well have been attributed to the plum-pudding which he ate at dinner. The bare suggestion of anything so "marvellous" was certainly enough to start the pack of quacks and marvel-mongers on the scent, so forthwith there breaks forth a flood of correspondence: one man announcing that the author of a certain book had, for years past, cured insanity by chloroform; another declaring that "a radical cure of insanity by chloroform is a sheer impossibility, and for this reason—it has not a moral system in its pathogenesis." We do not know whether this is asserted of the insanity or of the chloroform, but it is as true of the one as of the other. The same gentleman (Mr. Wallace) relates that when he touched, "for curiosity," some time ago, a "slothful, creeping, idiotic chi'd, it laughed, and Reason resumed her throne." This interesting narrative is somewhat marred by Mr. Wallace's previous observation, that the application of chloroform "may turn a lively, excitable lunatic into a half-idiot—nothing more;" and that he has "tried it on himself." The *argumentum ad hominem* is here employed with irresistible force, and our faith in the latter statement is unquestionably greatly strengthened by our opinion of the whole letter.

The true part which chloroform can play in the treatment of insanity is well understood by every practitioner. We venture to say that there is not one institution in which it is not fully appreciated. We recorded recently a death due to its administration to a lunatic. The treatment of acute mania, especially, is greatly indebted to the discoverers of chloroform. Certainly its value is not under-estimated. It is rather to be feared that so potent and simple an agent, in allaying violent frenzy, may be too freely used, than that it should be neglected. But the case in question was in no way to the point.

THE SALE OF DIPLOMAS.

THE practice of procuring a Continental degree of M.D., without any examination or residence, by the payment of money, is so manifest a fraud upon the public, and is a practice so repugnant to professional honour and destructive of professional character, that we feel compelled to publish at length the subjoined documents addressed to Mr. Pound, surgeon, of Odiham, and by that gentleman forwarded to us. It will be seen that they contain a proposition to obtain a "degree from a Continental University of the highest reputation," by simple purchase. We are pained to add that the writer is stated to have held an honourable appointment. We are loth to believe that one who has held a respectable post should descend to such a degradation, or inflict so deep an injury on his profession. The documents speak for themselves. The first is the printed circular, which was enclosed in the second, or *private* letter:—

"SIR,—If you wish to become a M.D. without absenting yourself from your professional duties, I can procure you the degree from a Continental University of the highest reputation, on terms more moderate than any hitherto known in this country.—I am, Sir, yours obediently, "———."

"October 19th, 1860.

"DEAR SIR,—Being on a short visit to my son, who is temporary assistant to ———, it occurs to me that if your opinion of changing from Mr. to Doctor Pound accords with general public estimation, I would be happy to be the instrument, premising that I write in the strictest confidence of *honourable secrecy*, even from my son. The printed circular on the other side speaks for itself, and any information you require I shall be happy to give by your dropping me a note to ———, to say when and where we may meet.

"As my stay is very short, and it would take eight or ten days before the diploma would arrive, although time or place makes no difference, yet it would be pleasant to have all completed while I am on the spot.

"I am, dear Sir, yours truly,

"H. A. CÆSAR, M.D., F.R.C.S.L."

COMPENSATION FOR WOUNDS.

THE regulations under which pensions and allowances are granted to officers of the Army have been revised by a Royal Warrant just issued. The loss of an eye or limb from injury received in action will be compensated by a gratuity in money of one year's full pay of his then rank or staff appointment. He may be recommended for a pension also, at a rate varying from £400 for a lieutenant-general, to £50 for a cornet; and if more than one eye or limb be lost, he may be recommended for a pension for each. For minor injuries, "not nearly equal to the loss of a limb," he may receive a gratuity varying from three to twelve months of his then pay. If the injury shall be so diminished as to be "not nearly equal to the loss of a limb," at the end of five years, during which the claimant must be twice examined by a medical board, the pension will then be permanent, otherwise it will cease. No pension or gratuity for these causes will be granted unless the actual loss shall have occurred within five years after the wound or injury was received. This scale of compensation is more liberal than by the previously existing custom, and will be received as a boon by those interested.

Correspondence.

"Audi alteram partem."

NEW REGULATIONS FOR DEGREES IN MEDICINE.

(LETTER FROM DR. CARPENTER.)

To the Editor of THE LANCET.

SIR,—I am desired by the Senate of the University of London to request that you will give immediate publicity to certain arrangements which they have made, with the desire to remove or to mitigate (so far as may be practicable) the inconveniences to which those candidates for medical degrees might be otherwise liable whose curriculum of study happened to correspond with the period of transition between the old and the new Regulations.

It may be well for me to point out, in the first place, that the new Regulations essentially differ from the old—

1st.—In the institution of a Preliminary Scientific Examination, to which the Chemistry and Botany of the *First* M.B. have been transferred; with the addition of Natural Philosophy and Zoology.

2nd.—In the transference of Physiology* and Chemical Toxicology from the *Second* to the *First* M.B. Examination.

Feeling confident that the curriculum as now amended will really prove in the end more advantageous to the candidate, as corresponding with the natural sequence of his medical studies, and that no serious inconvenience would accrue from at once bringing it into operation, the Senate determined upon this course after due deliberation, and have since found no reason to alter their decision. Being most desirous, however, to make the transition as little inconvenient as possible, they have carefully considered all the representations which have been made to them by those who urge that they are injuriously affected by the change; and as the result of that consideration I am directed to announce a temporary modification of the Regulations upon the following points:—

To candidates who matriculated in July last the same exemption is now accorded from the *additional* subjects of the Preliminary Scientific Examination as had been previously granted to those who matriculated before June.*

To candidates who would be qualified, by the completion of two years of medical study subsequently to matriculation, to present themselves for the *First* M.B. Examination of 1861, and who would be required to pass the Preliminary Scientific Examination in the same year, the option will be given of postponing the *whole* of their First M.B. Examination (if they so desire) until 1862, without thereby postponing the date of their *Second* M.B. Examination. They will thus be admissible to the Preliminary Scientific Examination and its Honours in 1861, to the First M.B. Examination and its Honours in 1862, and to the Second M.B. Examination and its Honours in 1863. Such as do not wish, however, to compete for Honours at the Preliminary Scientific Examination, and feel themselves prepared for the First M.B. Examination in 1861, will probably find it more desirable to present themselves for it in that year; postponing their Examination in Physiology (as allowed by the Regulations) until the succeeding year, if they so desire it.

For candidates who have already passed the First M.B. Examination, the *Second* M.B. Examination will be conducted under the *old* Regulations in the years 1861 and 1862, so as to give all such candidates the opportunity of obtaining their degree without any additional trouble. But for such as may not avail themselves of this opportunity, and who delay presenting themselves at the Second M.B. Examination until after the omission from it of Physiology and Chemical Toxicology, the necessity will arise of their showing their proficiency in these subjects at some First M.B. Examination, before they can be admitted to the Second.

Dissatisfaction having been expressed at the imposition of an additional fee of £5 for the Preliminary Scientific Examination, I have to point out that the fee for the M.D. Examination having been reduced from £10 to £5, the whole cost of the degree remains exactly as it was.

It may be well for me to add, that the total amount of the rewards held out by the University for special proficiency in the various branches of study included in the medical curriculum, though differently distributed, has been increased by £80 per annum.

I am, Sir, your obedient servant,

University of London, Burlington House, Nov. 8th, 1860. WILLIAM B. CARPENTER.

DR. TODD'S PRACTICE IN ACUTE DISEASES.

(LETTER FROM DR. MURCHISON.)

To the Editor of THE LANCET.

SIR,—My attention has been directed to some remarks in the *British Medical Journal* upon the review on Dr. Todd's "Clinical Lectures upon Acute Diseases," which appeared in the last number of the *British and Foreign Medico-Chirurgical Review*. These remarks were made by Dr. Beale in a lecture delivered at King's College Hospital, and they may be thought to require some notice on my part.

The principal point to which I desire to draw attention is the statement that my conclusions as to the results of Dr. Todd's treatment of fever are utterly wrong, because the facts upon which they are founded are incomplete. These facts were obtained from an analysis of Dr. Todd's case-books, which Dr. Beale maintains cannot justly be made the subject of statistical inquiries as to the results of treatment, inasmuch as all the cases of fever admitted under Dr. Todd were not entered in the case-books. To this I would reply:—

1. That Dr. Todd, on giving to me the case-books for the express object in question, and also in frequent conversations I had with him upon the subject, never expressed the slightest doubt as to the value of the data contained in them for arriving at a correct conclusion upon the matter. It is somewhat surprising, when the results are ascertained not to be favourable, to be told by Dr. Beale that the data are incomplete.

2. That Dr. Todd, in the work which formed the subject of the review, himself makes his case-books the subject of a sta-

* As I have received many inquiries respecting a supposed change in the character of this examination, it may be well for me to take this opportunity of stating that no change whatever has been made in its requirements; a knowledge of those parts only of comparative anatomy being expected without which the general facts and doctrines of physiology cannot be properly understood. The subject of histology, now for the first time formally introduced, has been for many years past included in the Examination-papers.

* This date was fixed as being that at which the Regulations were *adopted* by the Senate, and with the exception that they would be *promulgated* before the Matriculation Examination of July. Their promulgation, however, having been retarded for several weeks by delay in the Home Office, the Senate recognise the fairness of not imposing upon candidates who then matriculated additional subjects of which they had no information.

tistical inquiry as to the result of his treatment in another disease. Dividing the cases of pneumonia *contained in his case-books* into two periods, in one of which he practised a reducing treatment, and in the other a treatment by stimulation, he shows that the results in the latter period were more favourable than in the former, and from these results argues in favour of the plan of treatment pursued in the latter period. But, in addition to the many other objections pointed out in the review, which invalidate Dr. Todd's conclusions from these results, it is plain that the objection of all the cases being reported at one period, and not at another, is equally applicable here as in the case of fever. Surely Dr. Todd was a better judge of the value of the data contained in his case-books than Dr. Beale can be.

3. That, allowing that some cases were not recorded, I cannot admit the validity of the explanation which Dr. Beale would wish the readers of the *British Medical Journal* to believe—viz., that so many *successful* cases were omitted from the case-books, that, had all been included, the total results would have been very different from those given in the review. This would imply that a far larger number of cases had been omitted than those familiar with the manner in which Dr. Todd's cases were recorded will allow.

In the first place, the circumstance that during the autumn recess in some years no case was recorded, does not much affect the question. It is just as probable that the mortality was as great at that season as it was at other periods of the year; and as the cases were then rarely under Dr. Todd's own care, their omission every autumn would have been an advantage to the inquiry rather than otherwise.

Again, the omission of a few slight cases of febricula would not affect the mortality from typhus and typhoid fever. Amongst Dr. Todd's 108 cases of typhus there were 27 deaths, or the mortality was 25 per cent. To reduce this mortality even to 18 per cent., which is the average mortality in other hospitals, 42 cases, or nearly one-third of the entire number of cases of genuine typhus, not febricula, could never have been recorded, and every one of the omitted cases must have recovered. But it may be said that the reviewer has been mistaken in drawing a distinction between the cases of typhus and typhoid fever, that it is not always an easy matter to distinguish between the two, and that some distinguished authorities still refuse to recognise their specific non-identity. Still the mortality from both fevers, taken together, was amongst Dr. Todd's cases almost 23 per cent. (239 cases and 54 deaths); whereas in the Fever Hospital it has only been 19·6 per cent. (5326 cases and 1048 deaths). Again, it was stated in the review that 53 of Dr. Todd's cases were examples of febricula or relapsing fever, which are rarely fatal; but, supposing for a moment that every one of these cases, as well as 36 cases the nature of which is doubtful, were examples of genuine typhus or typhoid fever, still the mortality from all the cases (328 cases and 60 deaths) was scarcely more than one per cent. less than that of 5326 cases of typhus and typhoid fever *only* in the London Fever Hospital—that is, after deducting from the Fever Hospital cases 1302 cases, amongst which there were only 11 deaths.

Moreover, during three years I had an opportunity of knowing *all* the cases of fever admitted into King's College Hospital under Dr. Todd, and, for this period, the rate of mortality from *all* cases was quite equal to that above stated.

That the cases of fever admitted into King's College Hospital under Dr. Todd were more severe than those admitted into the London Fever Hospital, with the results of which Dr. Todd's cases have been compared, no one conversant with the class of cases treated in the latter institution will believe. (On this point, see the *Review*, p. 333.)

Dr. Beale has, in my opinion, stated nothing to make it appear that had the few cases of fever omitted from Dr. Todd's case-books been included, the results would have been *materially* different from those given in the review, or to show that Dr. Todd's plan of treatment was more successful than that practised by most of the profession. Neither do I see any reason to alter the conclusion with which the analysis of Dr. Todd's cases was summed up in the review, which was as follows:—

"From what has been stated, it seems legitimate to conclude that no advantage is to be derived, in the treatment of continued fever, by administering, *as a general rule, such enormous doses* of stimulants as were wont to be prescribed by Dr. Todd; and, indeed, it may be doubted if in many instances, more especially in young persons, such results are not positively injurious."—p. 334.

It may be worth mentioning, also, that a close study of Dr. Todd's cases during three years, and an extensive series of most carefully recorded observations carried on in another hospital, for the object of comparing Dr. Todd's mode of treating fever with that of giving stimulants in smaller quantities according to the exigencies of the case, has convinced me that the above conclusion is a just one.

It is much to be regretted that Dr. Beale, no doubt unintentionally, and out of zeal for the cause which he advocates, should have sought to strengthen his position by giving to the readers of the *British Medical Journal* a most erroneous idea of the review, and by making it appear to contain statements which it does not. It was not maintained in the review, as might be inferred from the general tenour of Dr. Beale's lecture, that stimulants ought not to be administered in fevers and other diseases; but the opinion was expressed, that stimulants might be pushed too far, and that they were pushed too far by Dr. Todd; and this is an opinion which is shared by all the most distinguished members of the profession with whom I have had an opportunity of conversing upon the subject.

The following extract from Dr. Beale's lecture illustrates his mode of argument on a most important question in medicine, and also shows how far his zeal has allowed him to misrepresent the review. The italics are in the original:—

"I would ask, was it likely that a man who considered himself to be, and worked till the last at his profession, as a student, was so utterly mistaken in his views, and so completely deceived in the results of his treatment, and wrong in his judgment, as this reviewer concludes? Were those house-physicians and clinical clerks and students, who watched during a period of more than twenty years his practice in this hospital, ... so utterly mistaken in their impressions, *that a quick, weak pulse becomes slower and stronger under the influence of alcohol, and that delirium increases as a patient's strength fails, and diminishes when his strength is upheld?* Is it likely that these phenomena, which could be observed again and again by any unprejudiced person who worked for six months in the wards, were in reality merely due, as the reviewer suggests, to the accidents of the malady, and not to the influence of the alcohol."

Could anyone fail to conclude, on reading this paragraph, that the reviewer had denied that delirium in fever increases as a patient's strength fails, and diminishes when his strength is upheld? Yet, in the whole review, such an opinion is not only not expressed, but not hinted at! On the contrary, the following statement was made with regard to the occurrence of delirium in fever:—

"Dr. Todd was one of the first to point out that the delirium and the coma, which are of such frequent occurrence in continued fever, are not due to any inflammatory or congested condition of the brain or its membranes," &c. (p. 338.)

With regard to the statement made in the review, to the effect that the pulse in typhoid fever frequently falls and rises again, quite irrespectively of the use of stimulants, I would refer your readers to the facts mentioned in the review (p. 328), which are familiar to everyone who has studied the natural history of the disease.

Arguments which consist in asserting that, because Dr. Todd spent his whole lifetime in the study of disease, he could not have been mistaken in his views, or deceived in the results of his practice, simply amount to nothing; they beg the entire question, and will never enable those who use them to arrive at the truth.

I shall be quite satisfied with the relative value which your readers may assign to the review, and to Dr. Beale's criticisms upon it.

In conclusion, I would merely observe that the terms in which Dr. Beale has thought proper to speak of the review are quite unwarranted by any expressions contained in it. Dr. Beale should read his own lecture, and ask himself whether some of his expressions are not more applicable to this.

I have the honour to remain, Sir,

Your obedient servant,

CHARLES MURCHISON, M.D., F.R.C.P.,

November, 1860. The Author of the Review.

P.S.—I take this opportunity of correcting a slight error in the figures as given in the review. The number of fatal cases of typhus was 27 in place of 28. This would reduce the rate of mortality from typhus to 25 per cent., as above.

CATARACT AND INSANITY.

To the Editor of THE LANCET.

SIR,—In your journal of the 20th ult., you record, on the authority of your special correspondent, the case of an insane patient, "the subject of double cataract," being restored to

"sanity of mind" by "the removal of the diseased crystalline bodies," and the consequent recovery of sight. The case, you will perhaps allow me to remark, is not so "exceptional" as it appears, inasmuch as two similar cases have occurred in my own practice—one at Colombo, and another at the Colney Hatch Asylum. However, the question of "coincidence" or "consequence" I prefer to leave open.

On the opening of Colney Hatch Asylum in 1852, there were admitted five or six patients, the subjects of cataract. I operated—i.e., either "couched" or extracted the "lenticular opacities"—in each and all of them. One patient recovered both her sight and reason, and was discharged as cured. A second, in whom extraction was performed, the lens of either eye being removed at one sitting, and within the space of two or three minutes, was very greatly benefited in the state of her mind by the restoration of sight; she has, too, been enabled to employ herself, with profit to the asylum, and with much comfort and advantage to herself, in fancy and other needlework. In a report of this second case, made many years since, I wrote thus:—"She is incurably insane; but the effect of the restoration of sight to her was (and is, most likely) in the highest degree pleasurable and beneficial, in so far as it places her in a position whereby the means of relief, *if not of cure*, are both increased and amplified."

I am, Sir, your obedient servant,
JAMES G. DAVEY, M.R.C.P. Lond.

Northwoods, near Bristol, Nov. 1860.

ST. LUKE'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—On reading Dr. Tuke's letter upon "Private Lunatic Asylums" in your journal of the 3rd inst., I observe he states, amongst the statistics of cures, that in St. Luke's Hospital, of all under treatment, they are 23·4 per cent.

I beg to give you the actual number of patients under treatment for each year during the last four years, with the exact per-centage of cures, which you will see to be much higher than is given in Dr. Tuke's statement:—

Year.	No. of Patients under Treatment.	Per-centage of Cures.
1856	165	63
1857	155	61·3
1858	150	54·66
1859	127	65·3

I remain, Sir, yours obediently,
EBENEZER TOLLER, M.R.C.S.,
St. Luke's Hospital, Nov. 1860. Res. Med. Superintendent.

NEW METHOD OF REDUCING STRANGULATED HERNIA.

To the Editor of THE LANCET.

SIR,—Under the above title you published, in your journal of the 20th ultimo, a communication from Mr. Jessop, of Cheltenham, which, both from its tenour and heading, would convey the impression, that the method he describes is a recent discovery; and in the two succeeding numbers of your invaluable periodical, the excellence and success of the plan proposed are borne testimony to by Messrs. Watkins and Johnson, as well as by Dr. Oliver. The Doctor seems to think that *his* mode of procedure is worthy of being called "another method," though it proceeds on the same principle—viz., that of placing the parts concerned in such a position that a flaccid body is *drawn* through a confined aperture, instead of being exposed to the difficult and dangerous ordeal of being pushed through the same.

Your correspondents on the present subject seem to have forgotten the fact, that the attention of the profession was drawn to this subject as early as December, 1849; but if the paper of that date has passed into oblivion, we are certainly indebted to Mr. Jessop for resuscitating a method of treatment for strangulated hernia which is destined to relieve alike the patient and surgeon of a painfully critical operation. In the number of THE LANCET for Dec. 8th, 1849, there is a short communication on this subject, by Mr. Hodge, then surgeon at Sidmouth, bearing the same title as that by Mr. Jessop, and from which it will be seen that a case of strangulated hernia, after having resisted the ordinary means of reduction, was brought to a happy termination by what may be called the gravitation principle of treatment.

I remain, Sir, yours obediently,
Accrington, Nov. 1860. W. S. MILLAR, M.D.

VACCINATION.

To the Editor of THE LANCET.

SIR,—On the 24th ult. I vaccinated a fine healthy baby, six months old, with fair hair, clear skin, and hazel eyes. On the 31st, there was a speck, about the size of a pin's head; and on the 4th inst., there was a beautifully-developed pock. During twenty-four years' practice I have not met with a parallel case.

I am, Sir, yours faithfully,
Aldersgate-street, Nov. 1860. CHARLES HOGG, L.R.C.P.E.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

AT a late meeting of the Academy of Sciences attention was drawn by M. Lallemand to a series of experiments undertaken by MM. Perrin and Duroy, in order to obtain a comparative estimate of the effects of alcohol, carbonic acid, and the various anæsthetics, on the nervous system of animals. Three ounces of alcohol mixed with an equal quantity of water were given in three equal doses, at a quarter of an hour's interval, to a large-sized dog. After the lapse of an hour the animal was in a complete state of intoxication, the muscular system being relaxed, the skin and conjunctivæ perfectly insensible to the touch, the pulse 120, and the respirations 22 per minute. The posterior arches of the last three dorsal vertebræ were now removed, and the spinal marrow laid bare for about two inches of its length. It was then found that the anterior and posterior columns of the cord, and the anterior and posterior roots of the spinal cord, could be pricked, seized with forceps, and pinched or pulled, without eliciting any symptom of sensibility or muscular convulsion. The paralysis of the spinal nervous system was found to be complete. The animal was then let alone for four hours, and at the expiration of that period, the alcoholic lethargy having considerably subsided, the same excitatory manipulations were resumed, and the cord was found to have regained its normal susceptibility, as proved by the appearance of the physiological manifestations usually attendant upon the employment of local stimulation. In order to ascertain the physiological effects of carbonic acid, the following experiment was performed:—The same process of vivisection having been accomplished—namely, the removal of the arches of the last three dorsal vertebræ,—the animal was made to inhale a mixture of carbonic acid gas and watery vapour, and at the end of ten minutes became quite motionless and senseless, the arterial blood having assumed a dark venous hue. It was then found that the posterior columns of the cord and the posterior roots of the spinal nerves could be pricked, pulled, or pinched, without the production of any sign of sensibility on the part of the animal; but that if, on the other hand, an anterior root were pricked, or the anterior column of the cord stimulated, convulsive movements were produced in the dog's hind quarters. Moreover, that if the sciatic nerve were bared by incision and irritated, the muscles to which it is distributed were immediately thrown into a state of spasmodic contraction. In other experiments oxide of carbon was substituted for carbonic acid with the same results. The deductions drawn by these physiologists from their recent course of investigation tend to establish the fact that alcohol, chloroform, and their "kindred spirits," act primarily on the nervous centres by *their actual presence within the nerve-substance;* whereas the carbonic gases act primarily on the blood only, by the conversion of the arterial into venous blood: the difference of their modes of action being that in the first case the anæsthesia is direct and primitive, and due to the immediate action of the toxical agent on the nerve-matter; in the second, it is indirect and consecutive, depending on the action of the modified blood upon the nervous centres.

Some weeks ago I referred in one of my letters to the grave objections which have recently been brought against the use of the écraseur, according to the ordinary *modus operandi* of M. Chassaignac, in the extirpation of hæmorrhoidal tumours. The first surgeon in Paris who drew attention to the occasional occurrence of traumatic stricture of the rectum, as a consequence of the use of the écraseur, was M. Nélaton, of the

Hôpital de la Clinique. This practitioner, in a clinical lecture last spring, noticed this drawback to the use of M. Chassaignac's favourite instrument, and said that many of the patients who had been operated on had had reason to regret the exchange of a bearable complaint for a veritable torment. M. Chassaignac, who is not the man to abandon a cause he has once declared a good one, at once set about a modification of his original plan, and now, instead of including the whole mass of the hæmorrhoidal tumour within the loop of his instrument, and removing it as if it were a polypoid growth, he contents himself with the excision of the crown of the tumour, trusting to the subsequent inflammation and cicatricial contraction to effect the rest of the process of obliteration requisite for the accomplishment of the cure. This new method, however, does not give the patient the benefit of one of the great advantages attached to the use of the écraseur under ordinary circumstances—namely, the perfect immunity from hæmorrhage, as proved by the occurrence at the Hôpital Laribossière of a death from the above cause after an operation for the extirpation of piles, although, as very justly observes one of the leading journals here, the *Journal of Practical Medicine and Surgery*, it has yet to be proved whether in the statistical reports of such operations, either by écraseur or other method, fatal terminations be not occasionally observed also. M. Chassaignac's error has hitherto undoubtedly consisted in too generous an excision of healthy tissue—a proceeding which has been followed by the formation of a large and progressively contracting cicatrix. The alarm has now been pretty widely given in France at least, and operators will for the future be more economical in their dealings with the mucous membrane of the rectum. If M. Chassaignac possess any imitators in England, it will be well for them to take a timely warning.

An interesting account of some recent experiments at Alfort is given in the *Gazette des Hôpitaux* of this week. Their author, M. Chauveau, was anxious to repeat before Dr. Corrigan, of Dublin, certain demonstrations on the living animal, which he performed two months ago for the first time in presence of MM. Trousseau, Bouley, and Reynal. The same journal records that Dr. Corrigan subsequently expressed himself as converted to the theory of M. Chauveau.

The object of these experiments was to prove that both the normal and abnormal sounds of the heart are entirely due to the normal and abnormal action of the auriculo-ventricular and sigmoid valves, and that the contraction of the auricles is so feeble that it is impossible to suppose them as in any way connected with the production of the heart sounds. A horse having been thrown, and then pithed to render it motionless, the nozzle of a pair of bellows was introduced into its trachea, and artificial respiration kept up, the heart meanwhile continuing to beat with force and regularity. An extensive opening was made in the chest immediately behind the left shoulder, and precautions were adopted in order to prevent the blood from flowing into the thoracic cavity. By this means, the pericardium being also laid open, a full view was obtained of the left ventricle and auricle, and also of the pulmonary artery. "It was now easy to see," says the report, "that the contraction of the auricle was very feeble, whereas that of the ventricle was most powerful and energetic, and accompanied moreover by a shortening in the direction of its length, the superficial fibres running from its point to its base puckering up into folds, the organ itself becoming hard under the finger at each systole, and assuming an almost globular form, the lateral prominence of the outer wall of the ventricle making it easy to comprehend how the thoracic throb is effected."

The stethoscope, applied over the ventricle, reveals the existence of two sounds: a first, dull and long, corresponding with the ventricular systole; a second, sharper and shorter, coincident with its diastole. In order now to prove that both of the two sounds are due to the shock and vibration, resulting from the sudden valvular expansion, if at the moment when the second sound is produced you pinch gently with the finger and thumb the root of the pulmonary artery, exactly at the place of its insertion into the ventricle, you feel between your fingers a remarkable thrill or vibration. If the stethoscope be applied over the same spot, a clear, sharp, and short sound is heard, its production being synchronous with the thrill previously felt by the observer's fingers. This thrill, or short, sharp sound, is produced by the action of the sigmoid valves, which are consequently (according to M. Chauveau) the undoubted source of the second sound. With regard to the mode of production of the first sound, if you apply a stethoscope over the heart during the systole of the ventricle, a long, dull sound is heard, which M. Chauveau attributes to the expansion of the auriculo-ventricular valves, and the same sort of vibratory thrill can also be felt if the finger be applied on the surface of the heart. The violence and duration of the valvular expansion are more appreciable when a finger is introduced through an incision made into the auriculo-ventricular orifice. The finger is then, during the continuance of the first sound, gripped by the free edges of the opening valves, and whilst the finger is engaged in this aperture, the first sound is either entirely absent or considerably weaker, owing to the diminution of the valvular vibration. By introducing a small metallic tube into the same opening, and so allowing of the regurgitation of a certain amount of blood, M. Chauveau produces a perfect bellows-sound; the same result being also produced by cutting off part of a valve, or removing one or more of its tendons. Also, by pinching, during the ventricular systole, the root of the pulmonary artery, so as to narrow its calibre, a systolic bellows-sound can be artificially imitated. The pathological conclusions drawn by M. Chauveau from his experiments are, that the systolic bellows-sound is due either to arterial constriction or to auriculo-ventricular imperfection, and that the diastolic bellows-sound is the result of arterial imperfection.

Paris, November 5th, 1860.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on

Thursday, Nov. 1st, 1860.

Carpenter, Robert Henry Spencer, Durham.
Mitchinson, Charles Calthrop, Royal Lancashire Artillery Militia.
Sutton, Frederick John, Ilminster, Somerset.

APPOINTMENTS.—At the first session of the Council of University College for the current academical year, George Grote, Esq., F.R.S., in the chair, the Professorship of Botany, held for so many years and with so much distinction by Dr. Lindley, was filled up by the appointment of Mr. Daniel Oliver, jun., F.L.S., librarian at the Royal Gardens, Kew.

Dr. Henry T. L. Rooke has been appointed Surgeon to the Seamen's Hospital, *Dreadnought*, vice Mr. John Tudor, who has resigned.

Mr. Henry T. Scott has been appointed Assistant-Surgeon to the South London Ophthalmic Hospital.

Mr. Francis J. Bailey has been elected Honorary Surgeon to the Liverpool School for the Deaf and Dumb, in the place of Mr. James B. Nottage, resigned.

Dr. Forbes Winslow has been elected President of the Medical Literary Society of London.

ROYAL INSTITUTION.—The resignation (on account of ill-health) of the Rev. John Barlow, honorary secretary for eighteen years, was announced at the general monthly meeting held on the 5th inst., and was received by the members with sincere regret.

HOSPITAL-TOUTING.—The Secretary of the City of London Consumption Hospital has announced that in the week following his appearance at the Mansion-house and speech before the Lord Mayor, upwards of £135 has been forwarded in donations and subscriptions, with further sums promised.

SISTERS OF MERCY IN EDINBURGH.—A large house is building in one of the new streets at Lawriston for a number of Sisters of Mercy, at a cost of about £3000.

CHOLERA IN INDIA.—Letters from India inform us that the cholera has made its appearance at Lucknow amongst H.M. 2nd Dragoon Guards, and that several cases have terminated fatally. Large numbers of natives have also died.

EPIDEMIOLOGICAL SOCIETY.—At the opening meeting of the eleventh session of this Society, held on Monday last, Dr. Babington, the president, delivered the introductory address, in which, after alluding to the loss which the Society and the public had sustained in the death of Mr. Alexander, C.B., Director-General of the Army and Ordnance Medical Department, and of the lamented Dr. Addison, he proceeded to a general review of the main epidemics that had prevailed in various parts of the world during the past year.—Dr. McWilliam then read a paper, by Professor Simpson of Edinburgh, entitled, "Notices of the Appearance of Syphilis in Scotland during the latter years of the Fifteenth Century." An abstract of this most learned and interesting paper will appear in an early number of this journal.

MIDLAND MEDICAL SOCIETY.—This Society has been re-organized, under the presidency of Dr. Fleming, with the view of affording to the profession in the Midland Districts the means of contributing to the advance of the science of medicine, and an opportunity of free access to its literature. Meetings are held twice a month (October to May inclusive), at the Birmingham Library, Union-street, for the reading of scientific papers and the relation of instructive and important cases. A large library of medical books and periodicals is in use. The reading room is open daily from ten A.M. to eight P.M. The subscription to the Society is one guinea per annum. Further information will willingly be given by the president, Mr. Duncalfe, of West Bromwich; the vice-presidents, Mr. Bolton and Dr. Melson; the treasurer, Mr. George Yates; or the honorary secretaries, Mr. Furneaux Jordan and Mr. C. J. Bracey.

HOSPITALS OF GARIBALDI.—I have been making the round of the principal hospitals of the city to-day—that is to say, of the SS. Apostoli, the Incurabili, the Trinità, and the S. Sebastiano, and wherever I made the inquiry I found the same complaints made of theft, wholesale and retail. In one hospital, particularly, the governor said to me, "I lose my head, sir; I have found the hospital attendants going off with two or three shirts on, with sheets rolled round their bodies. Last night we found one man going off with three military caps. Bread, wine, meat—everything is stolen; the very soup, after it is taken from the kitchen, is watered by the way, a portion of the good soup having been abstracted. Even the drugs are adulterated, and a commission appointed at my instance to examine them found the quinine had been mixed, and to this I attribute the loss of two of the fever patients. Three men are in the forts, under accusation; forty-eight I turned off yesterday. Yet the Intendente-General continues to send men who are only fit for the galleys, and whose great object is plunder. Do you know, sir, that, according to the accounts which have been made up, it has cost this month a piastre a day for each man (a piastre being a fraction less than 4d.)?" The Governor told me—and I fully acquiesce in what he said—that the only plan to be adopted was to sweep off the present staff, and introduce as much of the northern element as possible. The Piedmontese and Milanese hospital attendants are admirable, though their number is insufficient. It occurs to me, however, that much more might be done with what materials are at hand; and, in the hope that the suggestion may meet the eye of some who are interested in the hospitals of Garibaldi, I would propose that an inspector, a Piedmontese, be chosen from these men to watch over the organization of matters in every ward. Unless this be done, I am persuaded that the same system of plunder will be continued, and the same disorder and filth. The Dictator visited the St. Apostoli last week, and honourable mention is made of it in a letter written by him and published in the official journal. Though better than the others, it is by no means free from the evils of which I speak. That of St. Sebastiano, which I have more frequently visited than the others, and where our countrymen are quartered in Naples, is more open to complaint, but it cannot be judged by the same standard, as it is an *improvisé* hospital, and everything has to be arranged.—*Naples Correspondent of The Times*, Nov. 2nd.

THE CHOLERA IN MOROCCO: QUARANTINE NOTICE.—Lisbon, Oct. 29th.—By an order of the Board of Health, of the 26th inst., in *Diario* of the 27th, all the ports of the empire of Morocco are declared "free from cholera."

HEALTH OF LONDON DURING THE WEEK ENDING SATURDAY, NOV. 3RD.—The London returns still bear testimony to a very favourable state of the public health. The deaths registered in the week that ended last Saturday were 1049. In the last week the deaths included under the zymotic class of diseases were 241; the corrected average for corresponding weeks being 303. There were only 2 deaths from small-pox, and 1 from varicella. There were 47 from scarlatina, and 13 from diphtheria. Five from scarlatina occurred in the Kensington Town sub-district; 2 of these on the same day in one family at 8 Kensington-place. Forty-four children died of measles.

Births, Marriages, and Deaths.

BIRTHS.

On the 19th ult., at Carr-hill, Gateshead-on-Tyne, the wife of Alfred Scott Gell, Esq., M.R.C.S. Eng., of a daughter.

On the 19th ult., at Pwllheli, Carnarvonshire, North Wales, the wife of Hugh Lewis Pugh, M.R.C.S., of a son.

On the 4th inst., at Montague-square, the wife of C. H. F. Routh, M.D., of a daughter.

On the 5th inst., at New Broad-street, the wife of C. F. Maunder, F.R.C.S., of a son.

MARRIAGE.

On the 1st inst., at Christchurch, Paddington, Capt. D'Oyly Trevor Compton, Bombay Army, to Clara Elizabeth, widow of the late W. H. Pigou, Esq., surgeon on the Bombay establishment.

DEATHS.

On the 20th ult., at Howard Lodge, Tunbridge Wells, Richard Turner, Esq., M.R.C.S., aged 44.

On the 30th ult., at Tamworth, Joseph Taylor, Esq., M.R.C.S., late of Appleby, Leicestershire, in his 70th year.

On the 30th ult., at Upper Islington, Elizabeth Archer Wills, relict of the late William Wills, L.S.A., in her 69th year.

On the 31st ult., at Marine-terrace, Southsea, Wm. Wallace Wildey, M.D. R.N., of Cosham, in his 39th year.

BOOKS ETC. RECEIVED.

Mr. Parker on Syphilitic Eruptions.
Mr. Toynbee on the Ear.
Dr. Ewart on the Sanitary Condition of Indian Gaols.
Dublin Quarterly Journal.
Chemical News.
Pharmaceutical Journal.
British Journal of Dental Science.
Dublin Hospital Gazette.
Ure's Dictionary. (Three Parts.)

MEDICAL DIARY OF THE WEEK.

MONDAY, Nov. 12	ROYAL FREE HOSPITAL.—Operations, 2 P.M. METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M. ROYAL INSTITUTION.—3 P.M. General Monthly Meeting. NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—4 P.M. Clinical Lecture on "Epilepsy and Paralysis." By Dr. Brown-Séquard. MEDICAL SOCIETY OF LONDON.—8½ P.M. Clinical Discussion.—M. Groux, the subject of congenital deficiency of the sternum, is expected to attend, to exhibit certain phenomena connected with the heart's action.
TUESDAY, Nov. 13	GUY'S HOSPITAL.—Operations, 1½ P.M. WESTMINSTER HOSPITAL.—Operations, 2 P.M. ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.—8½ P.M. Mr. John Adams, "On a Case of Gastrotomy for Extra-Uterine Gestation."—Dr. Handfield Jones, "On a Case of Proptosis Goître, Palpitation, &c."
WEDNESDAY, Nov. 14	MIDDLESEX HOSPITAL.—Operations, 1 P.M. ST. MARY'S HOSPITAL.—Operations, 1 P.M. UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M. HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Mr. Solly, "On a Case of Farcy." NORTH LONDON MEDICAL SOCIETY.—8 P.M. Dr. Parr, "On a Case of Poisoning by Strychnia, in which Treatment was Successful."
THURSDAY, Nov. 15	ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M. LONDON HOSPITAL.—Operations, 1½ P.M. GREAT NORTHERN HOSPITAL, KING'S CROSS.—Operations, 2 P.M. HARVEIAN SOCIETY.—8 P.M. Discussion of Clinical Cases, by Dr. Pollock and Mr. Wreden Cooke.
FRIDAY, Nov. 16	WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON.—8 P.M. Practical Evening for the Narration of Cases and Exhibition of Specimens.—Dr. Fincham, "On a Case of Renal Abscess, accompanied by some Anomalous Nervous Symptoms."—Mr. Leggatt, "On a Case of Acute Glossitis."
SATURDAY, Nov. 17	ST. THOMAS'S HOSPITAL.—Operations, 1 P.M. ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M. KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M. CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

To Correspondents.

THE LECTURES OF DR. BROWN-SÉQUARD.

THE Clinical Lectures of Dr. Brown-Séquard, now in course of delivery at the National Hospital for Epileptics, will be published in this journal, for which they will be exclusively revised by the distinguished author. Dr. Brown-Séquard is in no respect responsible for the imperfect manner in which his Lectures have been printed elsewhere.

THE NEW SYDENHAM SOCIETY'S YEAR-BOOK.

IN reply to several communications on the subject of this work, we have to state that a review of it will appear in our next number.

I.S.A., (Yoxford.)—Schools of medicine exist in all the large cities of the United States, of Canada, and of India; in the last at Calcutta, Bombay, Madras, and Bengal. In the United States the curriculum extends over a period of two years' study, and diplomas are there to be had very readily, and without much trouble or hard study. In Canada the period is four years' study, and the examinations are not less strict than in this country. In India the period of study is also four years. In Canada and India all the branches of medical science are taught; but not so in the United States, except at the older Universities. Any courses of lectures that "I.S.A." may have already attended will count in the Colleges of the countries named.

Dr. C. D. Arnott's paper, "On Rigidity of the Os Uteri," shall be published in our next impression.

A Student.—Professional education has been decided by the Medical Council to commence on the entry of the pupil to the lectures *of* a recognised medical school.

Enquirer (Hull) will find a report of the case in THE LANCET of July, 1837.

MINIMUM AND MAXIMUM DOSES OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—A paragraph on chloroform has been going the round of the news papers, copied from *The Times*, as to an alleged remarkable new discovery in Paris that small or *minimum* doses, or fresh chloroform added to the inhaler before the patient has reached deep anæsthesia, by embarrassing respiration, leads to fatal accidents. I believe it is, in a great measure, true; but the fact is to be found in THE LANCET more than five years ago (March 17th, 1855). It was the key to the secret of more than 150 deaths from chloroform and ether that I brought recently before the British Association at Oxford. It has an eminently practical bearing on the safe administration of these agents, and we perhaps now know, from the late researches of Budge and others on the recurrent laryngeal and pneumogastric nerves, why this embarrassed respiration is so dangerous. Hospital "dressers" and students, and even female nurses, are in the habit of administering chloroform in our hospitals, relying on the observation that there is no fear to be entertained whilst you give the patient mechanically plenty of it. Senior hospital surgeons begin, in fact, to look on chloroform administration as one of those mediocre or minor things that take rank safely with the deep tenotomial responsibilities of abrading the groin for hernia, operat on, or the perineum for lithotomy. It is like an express train at fifty miles an hour; the pace of surgeon, dresser, and nurse is tremendous; let the least hitch occur, however, and the patient, *quasi* chloroform, is *dead!* Wise people then shake their heads and say, "Ah, we know nothing about such accidents." The mere fact of the Paris Academy and *The Times* publishing as something wonderfully new last week, what we have been observing through the aid of THE LANCET for five years, shows that if our academies, dressers, and nurses think a little learning to be "a dangerous thing," as Lord Palmerston said the other day, the less they know the more dangerous it becomes, at least for patients under chloroform.

I often tremble looking at mere boys giving chloroform; the only satisfaction one feels is that chloroform must be, as the unsophistical Audrey says, "a true thing"—a glorious thing, or it would not stand all the careless usage it gets. We begin, in fact, to look less grave even at deaths, when we know that ninety per cent. of such accidents occur in trivial operations, where chloroform is given by students or nurses in this light manner. It is something to know also that small or minimum doses are most dangerous; that in midwifery cases, on account of the active condition of the general reflex system and respiratory system, chloroform is most remarkably safe, and that de the from chloroform are more the result of the manner in which it is applied than the consequence of any poisonous property in the chloroform itself. The remarkable case of resuscitation in the last LANCET, by means of tracheotomy, bears out the "respiration theory" of these accidents most strongly; it was a case Marshall Hall would have clearly explained on this theory.

Yours, &c.,

Sackville-street, November, 1860. CHARLES KIDD, M.D.

Justus.—It is impossible to form a correct opinion upon an *ex-parte* statement. Dr. B. might furnish a satisfactory explanation of his conduct. Provided sufficient evidence be forwarded to us that there has been a breach of professional etiquette, we will publish the case; but the explanation, if any can be given, must be embodied in our report.

Convalescent Hospitals.—In our last impression it is stated that "a small institution of this kind is maintained at the cost of Baroness de Rothschild." The name of Lady Anthony de Rothschild should be substituted.

A. B. C.—Not if he can prove the contract.

Tyro shall receive the information if he will state his requirements more fully.

Assist. I.A.C., 1859.—He would possibly come under the old regulations; but it would be more prudent to "enter" at once, so as not to encounter any risk in the matter.

Arbitrator is right. The fee is an *honorarium*.

Mr. P. A. La Forgue.—The communication shall appear in the next LANCET.

SYPHILIS.

Enquirer.—It so happens that two authors, well known for having devoted themselves to the study of syphilis, have very recently published new editions of their works on that disease. We refer to Mr. Acton and Mr. Langston Parker, of Birmingham. Our correspondent cannot fail to gather much information from either book. We must, however, say of Mr. Langston Parker's production that it justifies (we judge from more than a cursory glance) the following passage in the Preface:—"I believe that this volume presents a correct view of the present state of medical knowledge on the subject of syphilis up to the period of its publication." As to M. Bousquet's opinion, we would submit that this physician has paid great attention to small-pox and vaccination, and has read, before the Academy of Medicine of Paris, the most learned and compendious reports on variola and Jenner's preventive operation. It is no wonder, therefore, that M. Bousquet (not Bosquet) should have a leaning to view the pathological phenomena of syphilis in the same light as those of small-pox. One morbid process, however, is not necessarily analogous to the other; thus syphilis, small-pox, and scarlet fever have all their peculiarities, though presenting some few points of analogy. It is not at all likely that the economy is affected *before* the appearance of the chancre; but it is difficult to say *when* the organism suffers *after* the appearance of the sore, though Ricord has fixed four or five days from the last coitus. The destruction of a chancre of recent date by caustic is perhaps less efficacious, as regards secondaries, than has been represented; but such a measure is not *valueless*, any more than cauterising a wound inflicted by a rabid animal or the dissecting-knife. Our correspondent is right in thinking that the treatment of chancre is unsettled; but we would beg of him to take a rapid survey of the treatment of the most common and best studied diseases, and then ask himself what, in a therapeutic point of view, is really *settled*. Does "Enquirer" *bleed* in pneumonia or give *wine?* Both these lines of treatment have strong and talented advocates.

Peter.—The College require a certificate of his having been instructed in the performance of vaccination, which must be given by some gentleman specially recognised by the College.

Ignoramus.—He can recover for medicine supplied in such a case.

DR. WOLFE.

JUST as we were going to press, we observed the following paragraph in *The Times*, in a communication from the special correspondent of that journal at Naples. It is quite evident that Dr. Wolfe has been exposed to most unjust suspicions and exceedingly harsh treatment:—

"At length eight cases of goods contributed by the British to the Italians, and directed to Dr. Wolfe, have turned up. They arrived six days since, having been detained three months and a half."

C. P., Newc.—1. The case should be laid before the Association.—2. The information would be regarded as confidential, if so desired by the informant.

Dr. J. M. Chaumont.—The communication shall be published.

Beta.—There is no legal defence to the action.

Precaution.—A benevolent lady has written to us, under this signature, in strenuous advocacy of the general use of fire-guards, for the purpose of preventing accidents by burning. We will endeavour to publish the remarks in question next week.

A. B., (Crewe.)—Consult the article in Dr. Copland's Dictionary.

Mr. P. J. Jay.—The diploma can be obtained as formerly.

Rose Pill.—The "examination" will most probably exempt him from the "regulation."

Dr. Carter, (Clifton.)—The case is marked for insertion.

Mr. A.—The Court of Chancery will regard the question as a matter of partnership. We can offer no opinion on the merits of the case. It will be better that all parties concerned should implicitly rely upon the decision of the Court.

Mr. F. H. Walmsley.—The advertiser is an impudent impostor.

Birmingham.—Mr. Solomon has not hitherto offered any explanation of his conduct.

M. can recover for the attendance, but not for the medicine supplied.

J. J. will have to undergo the preliminary examination.

Dr. J. R. Wardell's communication, "On Enteric Fever," shall be inserted in our next number.

A Union Surgeon.—If the contract entered into does not specifically include the extras, he can recover under the statute.

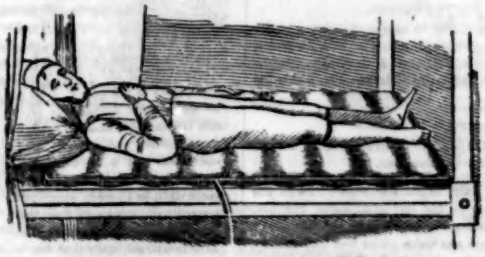
An Apprentice is exempted by the bye-laws of the College.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. C. D. Arnott; Dr. Edwin Bishop; Mr. E. Toller, St. Luke's Hospital; Dr. Routh; Mr. W. D. Syman; Dr. J. R. Wardell; Dr. C. Hogg; Dr. M. Ryan; Mr. W. S. Millar; Mr. H. T. Scott; Mr. G. L. Cooper; Dr. Kelburne King, Hull; Mr. Jordan, Birmingham; Dr. Stephen H. Ward; Dr. Tilt; Mr. Henry Thompson; Dr. Devenish; Mr. J. R. Nicholson; Mr. F. B. Lee, (with enclosure;) Messrs. Pinchard and Son, Taunton, (with enclosure;) Mr. J. Linscott, (with enclosure;) Dr. Ashton, Walton-le-Dale, (with enclosure;) Mr. Wm. Hunter, Aberdeen, (with enclosure;) Mr. J. Turner, (with enclosure;) Mr. J. Adams, Farningham, (with enclosure;) Mr. C. J. Herbert, Bedworth, (with enclosure;) Mr. Tovey, Portsmouth, (with enclosure;) Mr. W. Rawle, (with enclosure;) Mr. J. Hutchinson, (with enclosure;) Mr. W. Hall, Lancaster, (with enclosure;) Mr. T. B. Simmonds, Brighton, (with enclosure;) Mr. I. B. Brown; Dr. MacWilliam; Mr. Griffin, Weymouth; Crinoline; Enquirer; A. B., (with enclosure;) Omega, (with enclosure;) A Student; A Well-wisher to the Cause; Justus; Ignoramus; &c. &c.

HOOPER'S HYDROSTATIC BEDS AND WATER CUSHIONS,

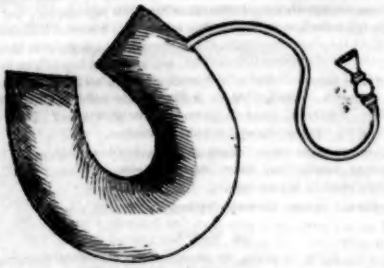
FOR USING ON AN ORDINARY BEDSTEAD.

FOR
BED-SORES,
CONSUMPTIVE CASES,
DISEASED JOINTS,
FEVERS,
FRACTURES.

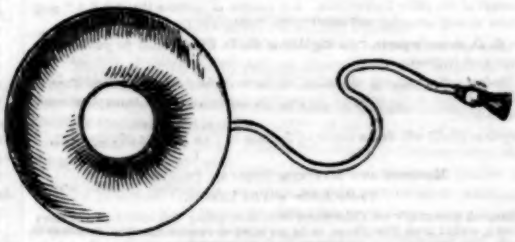


FOR
PARALYSIS,
RHEUMATISM,
SPINAL DISEASES,
AND
ALL INVALIDS.

Hydrostatic Bed, for an ordinary Bedstead.
(In sending an Order, the Width of the Bedstead should be stated.)



Horse-shoe Cushion,
To prevent Sloughing over the Sacrum.



Circular Cushion,
For Sitting on, or Relieving Bed-sores.

Waterproof Sheeting,
for Hospital and
Private use,
Accouchements,
&c.

Improved Urinals.
Hydrostatic Enemas.
Waterproof Sheets.
Elastic Bed-Pans.
&c.

Form of Cushion for general purposes.

HOOPER'S SPIRAL ELASTIC SUPPORTERS.

The Figures 1, 2, 3, &c., show the points at which the measures should be taken; the length should also be stated.

KNEE CAP AND ANKLE SOCK.

ABDOMINAL SUPPORTER.

STOCKING BELOW THE KNEE.

ABDOMINAL SUPPORTER AND THIGH-PIECE.

Constructed of a light, porous material, securing comfortable and permanent pressure.

*** *Illustrated Prospectuses sent free on application.*

WM. HOOPER, Inventor and Manufacturer, 7, Pall-Mall East; and 55, Grosvenor-street, London.